Safety Maintenance

EST. 1[illegible] • AMERICA'S PIONEER MAGAZINE IN ITS FIELD • FEBRUARY, 1959 • 50¢
Published By Alfred M. Best Company, Inc.

We learned a lesson from a lineman

"Safety is where I shine," one of our linemen told us recently. "Safety's one of the most important parts of my job. But *saving*—and that's important, too, for a family man—that's too tough. Why don't you guys in the office make it easy for us—like that Payroll Savings Plan for U.S. Savings Bonds?"

Of course, that is *exactly* what we want to do for *every one* of our people. We explained that to our lineman. But he certainly made us stop and think. Because if *he* didn't know about our plan for buying U.S. Savings Bonds through Payroll Savings, then many other employees must be in the same position.

We telephoned our State Savings Bond Director for help. He worked out a company-wide campaign for us. Application cards were placed in the hands of every person on our payroll. We had a *fair* participation when the campaign started. But within days afterward, we had an *excellent* percentage of bond buying employees.

It shows that practical people welcome a chance to set up this sound savings plan. Today, particularly, there are more payroll savers than ever before in peacetime. Look up *your* State Director in the phone book or write: Savings Bonds Division, U.S. Treasury Dept., Washington, D. C.

SAFETY MAINTENANCE

THE U. S. GOVERNMENT DOES NOT PAY FOR THIS ADVERTISEMENT. THE TREASURY DEPARTMENT THANKS, FOR THEIR PATRIOTISM, THE ADVERTISING COUNCIL AND THE DONOR ABOVE

BULLETINS & CATALOGS

As a convenience to executives, these new publications of manufacturers are offered by the Reader Service Department of SAFETY MAINTENANCE. To obtain copies write in the key numbers on the free-postage card below.

PLANT MAINTENANCE

Hard Floor Maintenance 321
Huntington Laboratories, Inc. Maintenance booklet describes "How to Finish and Maintain Hard Floors." It details procedures for effective maintenance of terrazzo, marble, concrete, magnesite and ceramic tile floors. Booklet covers such topics as cleaners, waxes and methods, etc.

Electric Cleaners 322
Ace-Sycamore, Inc. Literature illustrates a new line of electric cleaners for industrial and institutional cleaning. Hand portable, industrial tank and commercial models are spotlighted. Of special interest are the new hand portable models which can blow, vacuum or spray to clean machinery, motors and stock bins, etc.

Ice Melting Chemical 323
Chem Industrial Co. Bulletin recommends a new chemical that contains neither calcium nor chloride. Chemical is particularly suited to ice melting applications where it is necessary to reduce the corrosive effects of such chemicals on metals as in airports, and parking lots.

Floor Finishes 324
Oil Specialties & Refining Co., Inc. Brochure introduces an U.L. approved floor finishing compound which is guaranteed anti-slip. Brochure details operating instructions, characteristics and advantages of this finish which may be applied to asphalt, rubber, linoleum and terrazzo floors.

Portable "Airvac" 325
M-M-A, Inc. Brochure introduces an air-operated vacuum cleaner, which is made of non-ferrous metal and has no moving parts or electrical sparks. Unit can be used for the usual dry pick-up and the handling of volatile liquids and combustible materials. "Airvac" is lightweight and completely portable. Interested executives are invited to participate in a free "five day trial" offer to test and evaluate this new machine.

Wood Treatment & Finishes 326
L. Sonneborn Sons, Inc. Three-color booklet tells how this company's products help prevent deterioration of wood exposed to traffic, abrasion, heat, moisture, weather and fungus attack. "Lignophol" compound may be applied to floors, trim, paneling, cabinets and doors. Treatments and finishes are available for both exterior and interior applications.

Safety Floor Finish 327
Lewbill Industries, Inc. Data sheet describes a paint-like abrasive floor finish which has been designed to provide non-skid flooring where oil and water make metal, wood and concrete floors hazardous. Composition, application and the uses of this floor finish are spotlighted and a sample swatch illustrates the finish's abrasive qualities.

MAIL POSTAGE PAID CARD FOR MORE DATA

FIRE PROTECTION

Fireman's Helmet Designed for Safety 328
Mine Safety Appliances Co. Bulletin describes a fireman's helmet that provides a "tamper-proof" margin of safety through use of a "fixed crown" suspension. A double cradle provides a permanent crown clearance of at least 1¼ inches between wearer's head and the inside top of the helmet shell. The lightweight helmet is resistant to heat, cold and water.

New Fire Extinguishers 329
Walter Kidde & Co., Inc. A colorful, counter-mailer fold-out is used to introduce five new fire extinguishers. Units described include new dry chemical models, a loaded stream and a pressurized water extinguisher. All the new models incorporate improved nozzle designs.

Dry Chemical Fluidization 330
Ansul Chemical Co. Technical bulletin on dry chemical fluidization offers the results of experiments undertaken to explain why fresh filled extinguishers out-perform units subjected to vibration and packing due to transportation and storage. It also outlines how Ansul improved fluidization by improving gas tube design and relocating gas ports on its line of extinguishers to prevent solidifying of the dry chemical.

PERSONAL PROTECTION

Wooden Soles for Safety Shoes .. 331
Reece Wooden Sole Shoe Co., Inc. Bulletin describes the many advantages accruing to the use of wooden soles and wooden soled shoes and boots by workers who need non-conductive soles for hot plates, ovens and hot sand, etc. Soles are puncture proof and also suitable for wet, cold floors, salt cellars and acid conditions, etc. Units are designed for factory, foundry, steel mill and oil refinery wear.

Winter Liners 332
E. D. Bullard Co. Data sheet describes two new winter liners, designed to be water repellant and fire resistant. Knit and drill winter liners protect the head, neck and ears from cold and wet weather.

INDUSTRIAL HYGIENE

Nuclear Air Sampler 333
Gelman Instrument Co. Bulletin highlights a new sampler that collects aerosol samples near reactor operations and measures air volume. Unit is designed for laboratory or field application. For legal protection, the unit records actual volume sampled and operating time.

(Continued on the next page)

SPECIAL OFFER BELOW VALID ONLY FOR THREE MONTHS AFTER PUBLICATION DATE

READER'S INQUIRY CARD

HOW TO GET FREE DATA! **(No Postage Required)**

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FEBRUARY, 1959 **Please send me the following free data**

Free Bulletins (Cont'd)

Dust Control Handbook 334
Wheelabrator Corp. Handbook describes a wide range of industrial dust and fume producing processes that can be controlled with either cloth or glass bag-type dust collectors. Book explains and illustrates operating principles and applications for dust collectors.

Dermatitis Control 335
Dameron Enterprises, Inc. Illustrated brochure recommends a skin cleanser for the control and prevention of dermatitis. Resulting economies as well as ease of operation are highlighted. Cleanser contains an active bacteriostat which overcomes dermatitis and other skin ailments.

Arsine Gas Detector 336
Mine Safety Appliances Co. The health hazards of arsine and a simple colorimetric test to measure traces of the gas in air are given in a new bulletin. Kit provides a quantitative method for estimating the concentration in air. Kit is lightweight and completely portable.

Cloth Filter Dust Collectors 337
Torit Mfg. Co. Information sheets have just been published on two new cabinet, cloth filter, dust collectors. Photographs illustrate the internal design and typical applications of the new units. Rating tables and complete specifications are also included.

MISCELLANEOUS

Straddle Signal Warning Device . 338
Automotive Enterprises, Inc. Data sheet introduces a new straddle signal warning device. Unit incorporates a stock worded sign with a flashing warning light with a replaceable lens as well as a convenient carrying handle. Unit is explosion proof and operates on battery power. For highway emergency use, road repairs, construction sites, etc.

Service Emblem Awards 339
Bastian Bros. Co. Booklet spotlights an emblem service plan to express the quality of achievement employers may wish to accord honored employees. The many services as well as a list of prominent customers are detailed. Recommendations are given as to emblem material and design.

What's YOUR Problem?

- **Has an accident or fire interrupted production?**
- **Want to know how to prevent it?**
- **Do you need background information on equipment for industrial safety, hygiene, or maintenance?**

As a service to its readers, "Safety Maintenance" will arrange to supply manufacturers literature on the following subjects. Just insert the key number on the Readers Inquiry Card on the preceding page and be sure to fill in your name and address. If you need information on a specific type of product, simply write it in on the Inquiry Card.

Key Number	Subject
	PERSONAL PROTECTION
101	Safety Goggles
102	Face Shields
103	Lens Cleaning & Anti-Fogging Equipment
104	Sweat Band
106	Respirators & Masks
107	Protective Clothing
108	Women's Protective Clothing
109	Safety Belts
110	Safety Gloves
112	Anti-Slip Soles
113	Oil-Resistant Soles
114	Welding Helmets
116	Ice Grippers
117	Safety Shoes
118	Safety Boots
	FIRST AID AND HYGIENE
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146	Welding Curtains
148	Watchmen's Control Systems
149	Extinguishing Ash Trays
	LIGHTING AND WARNING DEVICES
150	Alarms & Warning Lights
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172	Scaffolds
173	Work Platforms
177	Carboy Pumps
	GUARDS
178	Machine Guards
179	Power Press Feeders
180	Safety Tools
181	Vacuum Sheet Lifters
182	Valve Operators
	EDUCATIONAL AIDS
191	Safety Signs
193	Employee Safety Guide
195	Changeable Letter Signs

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ALFRED M. BEST COMPANY, INC.
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NEW YORK 38, N. Y.

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PRINTED IN U.S.A.

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Alfred M. Best Company, Inc.
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U. S. and Canadian $4 (two years $6)
Foreign $5 (two years $8)
Single issues 50¢. Also quantity rates

Safety Maintenance

formerly "SAFETY ENGINEERING"

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Cover picture by courtesy of American Iron & Steel Institute's "Steelways"

AMERICA'S PIONEER MAGAZINE IN ITS FIELD

Published monthly by Alfred M. Best Company, Inc. Publication Office, Columbia Turnpike, Box 232, Rensselaer, N. Y. Editorial and General Offices, Best Building, 75 Fulton Street, New York 38, N. Y. Second-Class Postage paid at Rensselaer, N. Y. Subscription rates: $4.00 Per Year in the United States; $4.00 in Canada; Foreign $5.00. Single Copies, 50 cents.

Postmaster: please send change-of-address notices to: Safety Maintenance, Best Building, 75 Fulton Street, New York 38, N. Y.

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it's SAFE to say

● LET'S FEED THE ULCERS

In too many plants scattered all over the country, it is nothing short of scandalous that safety directors, like teachers and other dedicated members of the community are supposed to live on glory! A safety director is confronted with a list of required qualifications ranging from psychiatry to a gift for oratory unmatched since the days of William Jennings Bryan. He is supposed to come equipped with built-in as well as acquired specifications a mile long, but he is offered financial inducements which would bring raised eyebrows and indifferent stares to the countenance of many qualified secretaries.

A definite case in point recently attracted this corner's attention. There appeared in a large metropolitan daily a classified advertisement yelling to high heaven for a safety engineer whose duties would range from nurse-maid to father confessor to public speaker to expert compensation statistician to Public Speaker No. 1—all for a salary no self-respecting truck-driver's helper would accept. Let's not forget to add that an engineering degree plus several years' experience would be necessary, plus a willingness to "re-locate" from one section of the country to the other.

Most of us choose our life's work because we are thoroughly imbued with a desire to render the best possible service without heavy emphasis upon the purely—or impurely—financial aspects. Moreover, the inner joys of dedication are beyond all mortal description but even ulcers have to be fed and at today's prices, they are not cheap!

● SAFETY UNDER THE SUN

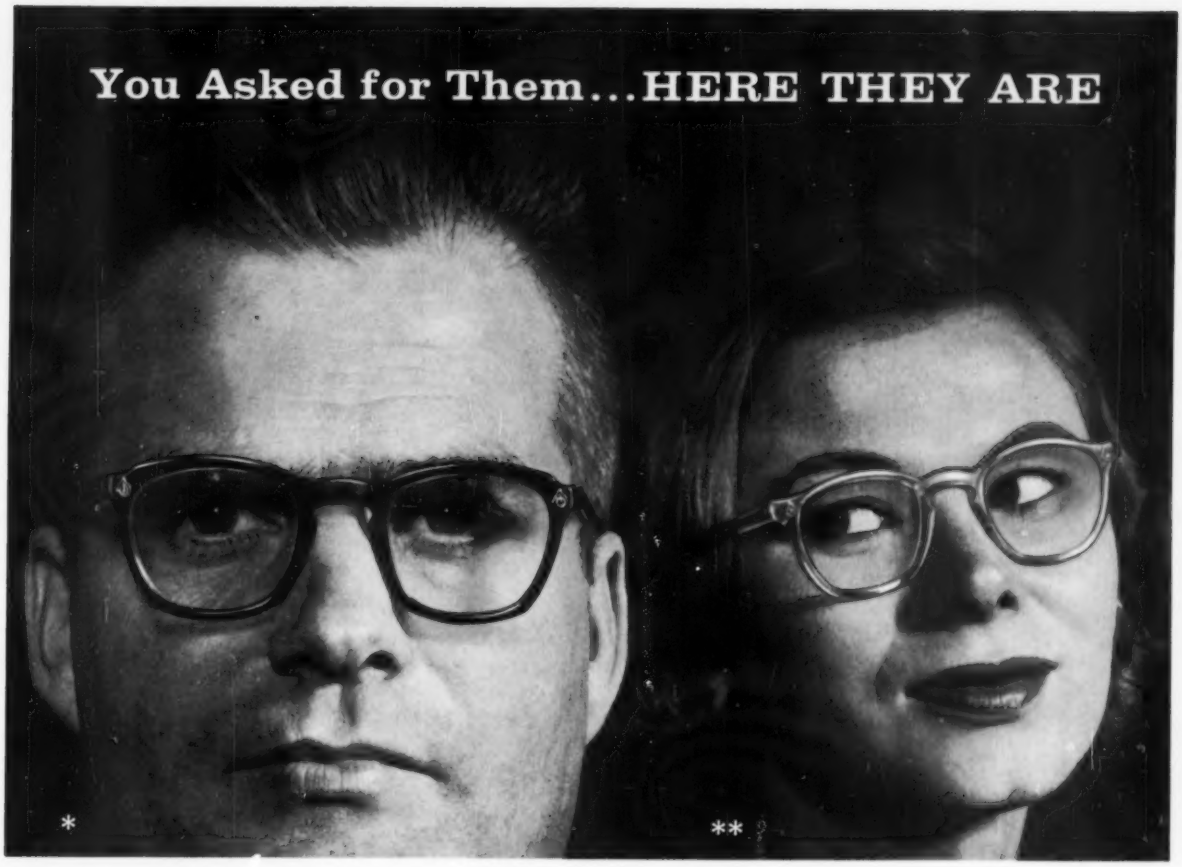
Most of us visualize the State of Florida as a land of well-heeled beachcombers either permanently retired or displaying ever-increasing areas of epidermis at the side of kidney-shaped swimming pools on the grounds of this year's posh hotel.

It may come as a mild surprise to learn that many new industries have joined the Florida invasion and in the wake of that influx, the safety movement has still further opportunity to demonstrate the multiple advantages of the accident prevention and health conservation crusade.

According to the "Miami Herald" recently, Florida's very progressive State Industrial Commission Chairman, James T. Vocelle has voiced grave concern that in the first eleven months of 1958, there were 233 industrial accident fatalities, an increase of sixteen over the previous high of 214 for all of 1956.

In spite of the gloomy picture under the sun of Florida, Mr. Vocelle said that of more than 1,500 safety orders issued to employers, all but a handful have complied promptly. Safety codes covering material hoists, portable electric power tools, excavations and trenching, and operation of crane booms near power lines have been adopted under authority of laws enacted by the Florida legislature. Undoubtedly, this will result in heavier emphasis upon safety activity in the state since luxury hotels, Mediterranean villas and modest retirement homes all must be built by industry. Apparently, we need more safety engineers lucky enough to get appointments under the sun of America's Riviera.

Let's hope they won't be expected to live on ozone but will receive compensation commensurate with their true status.



AO ULTRASCOPIC SAFETY GLASSES

*in Mahogany **in Pink Crystal

Here's eye flattering eye protection workers *want* to wear! The glasses have all the safety features of our onyx on crystal frame series including heavier eyewire and bridge — the patented eyewire specially engineered to support lens against deflection toward eye if struck — an exclusive AO feature. Perforations in side shields control fogging, shield contour makes R fitting easier and protects like a cup goggle. Give this handsome, comfortable eye protection to your workers. Your nearest AO Safety Products Representative can supply you.

Always Insist on Ⓐ *Trademarked Safety Products*

American Optical
COMPANY
SAFETY PRODUCTS DIVISION

Quick Facts

44, 46, 48 eye sizes (42 without side shields)

18, 20, 22, 24, 26 bridge sizes

Comfort cable and spatula temples

Frames — flame-resistant cellulose acetate butyrate

Bridge — sturdy, face-formed

Nose Pads — wide for comfort — rocking pads also available

Lenses — symmetric, no rights or lefts. Planos interchangeable. 6 Curve Clear Super Armorplate or 6 Curve Calobar Super Armorplate. May be ground to worker's prescription.

AO Plaque — you can't miss it and you can't miss obtaining true safety frames when you see it.

SOUTHBRIDGE, MASS.
Safety Service Centers in Principal Cities

(For details, use Key # B-1 on card on page 1)

Los Angeles, Calif. *February 5–6*

Ninth Annual California Statewide Meeting of the Governor's Industrial Safety Conference (Biltmore Hotel). Michael Flagg, Conference Coordinator, Dept. of Industrial Relations, 965 Mission St., Room 400, San Francisco, Calif.

Ashville, N. C. *March 1–3*

Twentieth Annual Southern Safety Conference and Exposition (Battery Park and George Vanderbilt Hotels), W. L. Groth, Executive Director, P. O. Box 8927, Richmond 25, Va.

Philadelphia, Pa. *March 4–5*

Twenty-Fifth Annual Regional Safety & Fire Conference and Exhibit (Bellevue-Stratford Hotel). Harry H. Verdier, Executive Director, Safety Council, Chamber of Commerce of Greater Philadelphia, 121 S. Broad St., Philadelphia 7, Pa.

Boston, Mass. *March 16–17*

Thirty-eighth Annual Massachusetts Safety Conference and Exhibit (Hotel Statler Hilton). Bruce Campbell, Manager, Massachusetts Safety Council, 54 Devonshire St., Boston 9, Mass.

Fort Wayne, Ind. *March 17–18*

Northeastern Indiana Safety Conference & Exhibit. Ivan A. Martin, Manager, Safety Council, Chamber of Commerce of Fort Wayne, Ft. Wayne 2, Ind.

Los Angeles, Calif. *March 23–25*

Sixth Annual Western Safety Congress & Exhibits (Ambassador Hotel). Greater Los Angeles Safety Council, 3388 W. 8th St., Los Angeles 5, Calif.

Cleveland, Ohio *April 5–10*

Nuclear Congress and Atom Fair (Public Auditorium) sponsored by International Atomic Exposition, Inc., Architects Bldg., Philadelphia 3, Pa.

Berkeley, Calif. *April 7–8*

Seventh Annual Eastbay Public Safety Congress (Hotel Claremont). Eastbay Chapter National Safety Council, 1322 Webster St., Oakland 12, Calif.

Kansas City, Mo. *April 9–10*

Fourteenth Annual Central States Safety Congress (Hotel President & Municipal Auditorium). George M. Burns, Managing Director, Kansas City Safety Council, 419 Dwight Bldg., Kansas City 5, Mo.

New York, N. Y *April 13–17*

Twenty-ninth Annual Greater New York Safety Convention and Exposition (Hotel Statler). Greater New York Safety Council, Inc., 60 East 42nd St., New York 17, N. Y.

Syracuse, N. Y. *April 20–22*

Sixth Biennial Central New York Safety Conference and Exposition (Hotel Syracuse). Newell C. Townsend, Administrative Secretary, Central New York Chapter A.S.S.E., 351 S. Warren St., Syracuse 2, N. Y.

Indianapolis, Ind. *April 22–23*

Twelfth Central Indiana Safety Conference & Exhibit (Claypool Hotel). Indianapolis Safety Council, 320 N. Meridian St., Indianapolis, Ind.

Columbus, Ohio *April 28–30*

Twenty-Ninth Annual All-Ohio Safety Congress and Exhibit (Deshler-Hilton Hotel). Arthur W. Moon, Congress Manager, Room 611, Ohio Departments Bldg., Columbus 15, Ohio.

Allentown, Bethlehem, Easton, Pa. *May 4–6*

Thirty-Second Annual Eastern Pennsylvania Safety Conference. Harold A. Seward, Secretary-Treasurer, Lehigh Valley Safety Council, 602 E. 3rd St., Bethlehem, Pa.

Niagara Falls, N. Y. *May 5–7*

Nineteenth Western New York Safety Conference (Hotel Niagara). Clifford H. Seymour, Executive Secretary, Western New York Safety Conference, P. O. Box 315, Niagara Falls, N. Y.

Rochester, N. Y. *May 12–14*

1959 Genesee Valley Safety Conference & Exposition (Manger Hotel). Earl R. Wallace, Vice President, Genesee Valley Safety Conference, 55 St. Paul St., Rochester 4, N. Y.

Roanoke, Va. *May 18–20*

Virginia Safety Association Conference (Roanoke Hotel). James T. Wadkins, Mgr., Virginia Safety Association, 2051 Monument Ave., Richmond 20, Va.

Chicago, Ill. *September 21–25*

Fourteenth Annual Instrument-Automation Conference & Exhibit, (International Amphitheatre). Fred J. Tabery, 3443 S. Hill St., Los Angeles 7, Calif.

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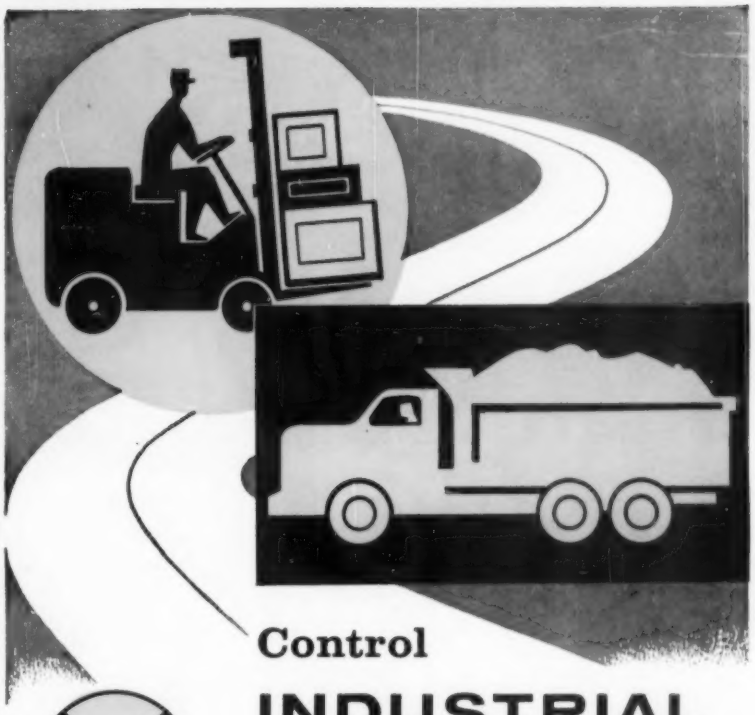


Control

INDUSTRIAL TRAFFIC with Stonehouse Signs!

Today's vast manufacturing plants have spawned a new and growing hazard, vehicle, pedestrian and rail traffic in and around plant grounds and buildings. Too often, this traffic "just grows"... is left to shift for itself, without control.

In your plant, play it safe with industrial traffic signs, made for industry by STONEHOUSE. All signs are made of enduring, tested materials, and designed in accordance with American Standard specifications.

Remember ... nothing costs so little, yet pays off so handsomely, as accident prevention!

* *Write today for our free, full-color, 64 page catalog of thousands of ready-to-ship safety signs, plus information about custom-printed signs to meet your special needs.*

"Signs since 1863"

Stonehouse SIGNS

STONEHOUSE SIGNS, INC., Stonehouse Building, 9th and Larimer, Denver 4, Colorado

(For details, use Key # B-2 on card on page 1)

The chances are, our doctors tell us, that one in every four of your employees (whether key executives, skilled workers, experienced secretaries or valued clerks) will develop cancer at some time in their lives. What is worse, many of them may die **needlessly,** unless they know how to guard against it. To help save the lives of more of your fellow-workers, call or write our nearest office for information about a free employee education program, geared to your particular factory or office.

American Cancer Society

Contractor's new methods make safety easy.

Broken-back splint is shown to enthusiastic first-aid class of 200 construction workers at big McGraw project. Frequent meetings make safe way the routine way.

safety is a habit

Of all the unknown factors the constructor takes on when he signs a contract, the safety of his men and of his machines and materials stands high in his load of risks. Unless careful, up-to-date plans and methods are followed the penalty can be severe for men and company alike.

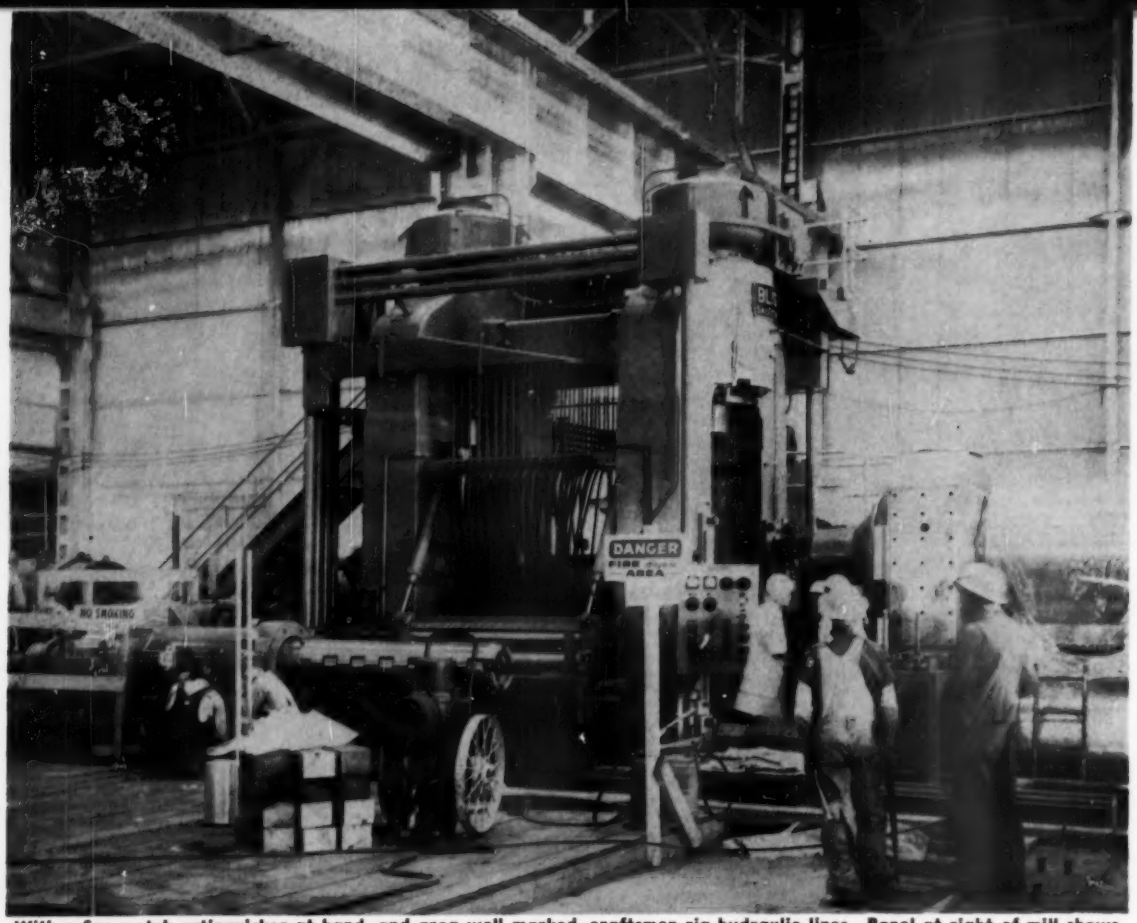
For example, on the projects of F. H. McGraw & Company, accidents are averted daily by the steady enforcement of safety codes which the company has set up. Certainly the eye-taking dangers familiar to the construction scene such as large swinging beams and working from great heights take constant alertness. But every tin-hatted man knows that it is the small load carelessly lifted, a rope or cable untested, or the carelessly piled stack of material that accounts for most of the injuries and damage. Ordinary housekeeping and tried precautions—made a routine—count most.

Typically, at the large Olin Mathieson-Ormet aluminum project in the Ohio Valley, weekly safety meetings were established at the outset by C. O. Dannenfelser, chief of plant services, with the craft stewards. Says Carl: "This brought safety directly into contact with the individual crafts here on the job. Any unsafe practices or existing hazards were brought up in these meetings and corrected immediately."

Here also a monthly Safety Bulletin illustrated with cartoons is issued. This shows monthly man-hours on the job, injuries by job classification, first-aid and doctor cases, and any lost-time accidents. Everyone has a chance to see the "score," to think about it. Regular posters and pay envelope reminders in the form of "Ur-Dough" drolleries have helped too.

Safety Inspectors are appointed

Ambulance and first-aid crew, including a registered nurse, stands by regularly at this wide-spreading smelter and rolling mills project at Hannibal, Ohio.



With a fire-watch extinguisher at hand, and area well marked, craftsmen rig hydraulic lines. Panel at right of mill shows electrical switch tagged and locked out to prevent accidental circuit connection during construction at mill project.

Personal protective equipment is vital on construction job. Worker shows pierced helmet which saved his life.

for each work area of the project. With them, the guards and firemen and the entire plant services staff are trained to watch for job hazards at all times. Constant inspections have definitely paid off in fewer accidents.

Safe construction methods contributing to this record include:

testing and tagging high pressure lines while a safety officer is present,

welding with a fire watch on hand if in an area with flammable materials,

posting illuminated LIVE VOLTAGE signs in entire areas where there is danger from high lines,

tagged and locked-out electrical switches, and cutting ditches at the proper slope to prevent falls.

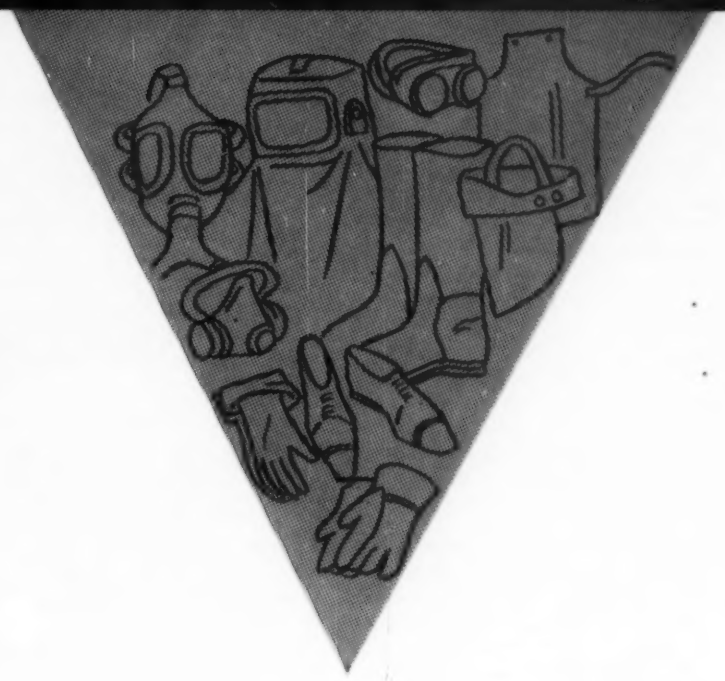
Safe methods on the construction job are greatly abetted by thoroughly modern equipment, such as air-assist controls on powerful cranes and shovels which help the operator to control movements, and two-way, short-wave radio in supervisory vehicles.

Recently a dangerous and expensive fire was prevented when a truck load of filled pot flares hit a bump on the construction site. One flare tipped over and ignited, and doubtless the whole load would have exploded but for the quick action of a superintendent who was driving past. He immediately called the project fire station by car telephone, and in a few minutes the blaze was out, with truck, its load, operators and nearby plant equipment all safe.

F. H. McGraw & Company's policy is to provide standard kinds of construction equipment with good safety features wherever possible. By standardization, accidents through unfamiliarity with strange equipment are avoided entirely.

More than a quarter century's experience has left no doubt among the company's constructors that sound methods and alertness, with modern equipment, make for easier operations and definitely assist in good safety records.

Pictures by courtesy of F. H. McGraw & Company.



SAFETY EQUIPMENT FOR HANDLING

Phosphoric Acid

While personal protective equipment is not an adequate substitute for good, safe working conditions, adequate ventilation, and intelligent conduct on the part of employees working with phosphoric acid, it is, in many instances, the only practical means of protecting the worker, particularly in emergency situations. One should keep firmly in mind that personal protective equipment protects only the worker wearing it, and other unprotected workers in the area may be exposed to danger.

The correct usage of personal protective equipment requires the education of the worker in proper employment of the equipment available to him. Under conditions which are sufficiently hazardous to require personal protective equipment, its use should be supervised and the type of protective equipment selected should be capable of control over any potential hazard which may arise.

The following personal protective equipment should be used when conditions indicate the necessity.

Eye Protection

Chemical Safety Goggles: Cup-type or rubber framed goggles, equipped with the approved impact resistant glass or plastic lenses, should be worn whenever there is danger of phosphoric acid coming in contact with the eyes. Goggles should be carefully fitted to ensure maximum protection and comfort.

Spectacle-Type Safety Goggles: Metal or plastic rim safety spectacles with unperforated side shields which can be obtained with prescription safety lenses, or suitable all-plastic safety goggles, may be used where continuous eye protection is desirable, as in laboratories. These types, however, should not be used where complete eye protection against phosphoric acid is needed.

Face Shields: Plastic shields (full length, 8 inch minimum) with forehead protection may be worn in addition to chemical safety goggles where complete face protection is desirable. Chemical safety goggles should always be worn as added protection where there is danger of material striking the eyes from underneath or around the sides of the face shield.

Respiratory Protection

Some exposure to phosphoric acid vapors from acid action on metals may occur in tanks during equipment cleaning and repairs, when decontaminating areas following spills, or in case of failure of piping or equipment. This is a remote possibility, however; but if there are any doubts concerning the hazards of such exposures, proper respiratory protection should be provided as described below.

NOTE: Respiratory protective equipment must be carefully maintained, inspected, cleaned and sterilized at regular intervals, and

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The above material is from the "Chemical Safety Data Sheet for Phosphoric Acid" published by the Manufacturing Chemists' Association, Inc. The full data sheet, in addition to personal protective equipment, covers the properties of phosphoric acid, hazards, engineering control of hazards, employee education and training, handling and storage, tank and equipment cleaning and repairs, waste disposal, medical management, and first aid.

Copies of the complete data sheet are available at 30¢ from: Manufacturing Chemists' Association, Inc., 1625 Eye St. N.W., Washington 6, D.C.

always before use by another person.

(a) Self-contained Breathing Apparatus which permits the wearer to carry a supply of oxygen or air compressed in the cylinder, and the self-generating type which produces oxygen chemically, allow for greater mobility. The length of time a self-contained breathing apparatus provides protection varies according to the amount of air or oxygen supply carried. Cylinder (or compressed) oxygen should not be used in tanks or other confined spaces.

(b) Positive Pressure Hose Masks supplied by externally lubricated blowers. Since these masks depend on a remote air supply, they should be used only where conditions will permit safe escape in the event of air supply failure. Care must be taken to locate the blower air source in an area which is free of air contaminants.

(c) Air-line Masks supplied by plant compressed air are suitable for use only where conditions will permit safe escape in case of failure of the compressed air supply. Such masks should be used only in conjunction with a suitable reducing or demand-type valve, excess pressure relief valve, and filter. The compressed air should be checked frequently to make certain that harmful gases from the decomposition of the lubricating oil used in the compressor, or impure air supply, are not present.

(d) Industrial Canister-Type Gas Masks, equipped with full face pieces and approved by the U. S. Bureau of Mines, fitted with the proper canister for absorbing phosphoric acid vapor, will afford protection against concentrations of phosphoric acid not exceeding 2 percent by volume when used in accordance with the manufacturer's instructions. The oxygen content of the air must not be less than 16 percent by volume. The masks should be used for relatively short exposure periods only. They may not be suitable for use in an emergency since, at that time, the actual vapor concentration is unknown and it may be very high. The wearer must be warned to leave the contaminated area immediately on detecting the odor of a harmful vapor; this is an indication that the mask is not functioning properly or that the vapor concentration is too high.

NOTE: Where carbon monoxide may be encountered in addition to phosphoric acid, the mask should be equipped with an all-purpose canister and a timing device as approved by the U. S. Bureau of Mines.

(e) Chemical Cartridge Respirators may be used to avoid inhaling disagreeable but relatively harmless concentrations of phosphoric acid vapor. These respirators, however, are not recommended for protection where greater concentrations of phosphoric acid vapor may be encountered.

Head Protection

"Hard" hats should be worn where there is danger from falling objects. If hard hats are not considered necessary, soft-brimmed hats or caps may be worn to give protection against liquid leaks and splashes.

Foot Protection

Leather or rubber safety shoes with built-in steel toe caps are recommended for workers handling drums of phosphoric acid. Rubbers may be worn over leather safety shoes. Rubbers and shoes should be thoroughly cleaned and ventilated after contamination.

Body, Skin and Hand Protection

Sustained or intermittent skin contact with liquid phosphoric acid may produce dermatitis at the site of contact. It is imperative that contaminated clothing be removed promptly and laundered and thoroughly dried before re-use. Affected areas of the body should be washed thoroughly with soap and water (except the eyes). As a general hygienic measure, facilities for personal cleanliness should be provided and washing before lunch and at the end of the work day should be encouraged.

Clothing made of rubber and other impervious material may be worn to protect the body against phosphoric acid splashes. These garments must be cleaned inside and out each time they are used.

FIRE FIGHTING

Phosphoric acid is not flammable, but it can react with metals to liberate hydrogen, a flammable gas. Where phosphoric acid is present in fire fighting, care should be taken to avoid exposure to skin and eyes from mists and splashes. Where phosphoric acid vapors may be encountered, firemen should wear as minimum protection, all-purpose canister gas masks approved by the U. S. Bureau of Mines. Self-contained breathing apparatus should be worn if heavy concentrations are suspected (over 2% by volume in air).

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Veterans of Safety Elect New Officers

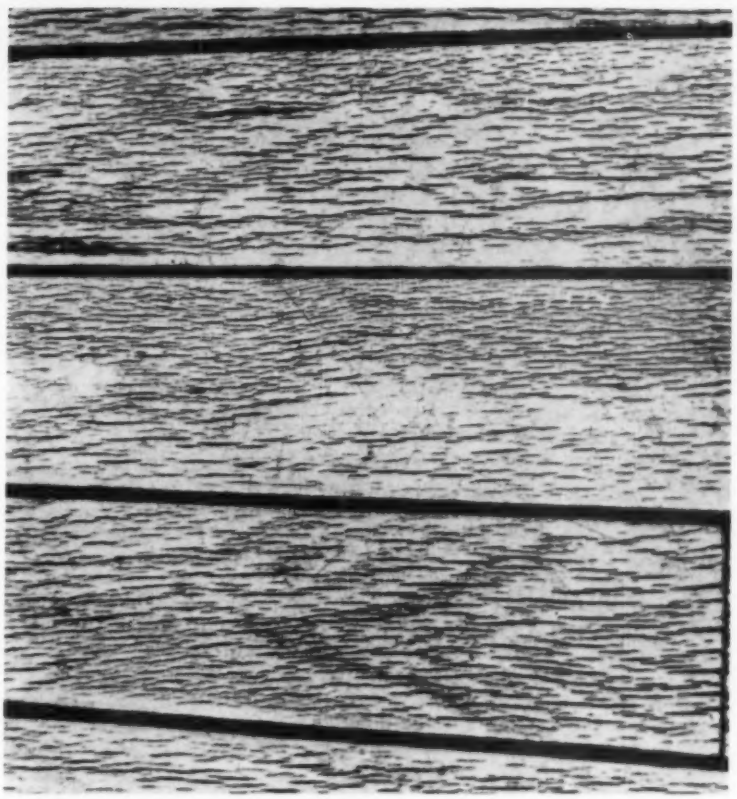
A. F. Parmelee, President of the United States Safety Service Company, was recently elected President of the Veterans of Safety, now in its 17th year.

The Veterans of Safety will publish in September, 1959 a hard cover bound book with pictures, biographies, and specialties in Safety Enginering of their membership. The volumes will be placed, at no cost, in all engineering college libraries so that engineering students can, by writing to any of those listed on a specific subject, receive the benefit of specialists in the field of safety in which they are interested. This is a service never offered before by any group and is a contribution to future engineers' careers by the Veterans of Safety at no cost to the student. These books will also be available to all other college, university, high school and public libraries at a price of $2.00 to cover cost of publication.

Other officers to serve with President Parmelee for 1959 are: 1st Vice President—E. Willard Merritt, Walter G. Legge Co., Inc., New York, N. Y.; 2nd Vice President—Joseph H. Travers, Accident Prevention Bureau, Pacific Maritime Association, San Francisco, Calif.; Secre-

(Continued on page 23)

how poor maintenance RUINS — WOOD FLOORS



This picture is of strip maple—once a beautiful light colored floor with its lustrous grain making it one of the most desirable of all flooring materials. Now this floor presents a disgusting picture of absolute negligence of floor care.

There is a very true saying that "more floors are scrubbed away than are walked away." Even the most uninformed layman would readily say that this wood looks like it is dried out and shrunken. This floor has been scrubbed to death with harsh cleaners. Notice how the wood is split. This condition is caused by fast, harsh cleaners with powerful wetting agents, which have carried strong alkalis down deep into the celled structure of the wood causing crystallization splitting of the wood and drying out of the natural oils in the wood.

Cell Structure Opened

When this occurs the wood cell structure is opened up and bacteria, molds, dirt are carried down into these voids by cleaners, floor oils, harmful wetting and then pounded in by traffic—serious damage and deterioration to wood fibers results, necessitating costly reconditioning and ever increasing maintenance cost or even expensive replacement.

To prevent such damage and replacement, a treatment must be used to fill and close all the wood cells, binding each of them together so that even moisture cannot penetrate the surface. Because of the lateral sawing of lumber, the surface is the factor of concern ($\frac{1}{64}$" in depth or less than a thickness of a fingernail). Proper sealing of this surface will protect the whole wood floor.

This strip maple floor could still be a thing of beauty had the owner periodically sealed the floor and provided a suitable surface finish to protect against wear and keep destructive elements from penetrating into the floor itself.

The Research Department of the Maple Flooring Manufacturer's Association working in cooperation with independent testing laboratories continues its search for improvements in floor finishing products. The purpose of these tests is to determine acceptability of finishing materials for heavy duty and gymnasium type floors. The MFMA set down these nine points as to a minimum standard of a good floor finish product.

1. The seal must penetrate the top surface of the wood.

2. It must seal the pores so as to keep out dirt and resist soil stains.

3. The finish with its pentrating quality must not darken the wood.

4. The finish must reflect light so as to improve illumination.

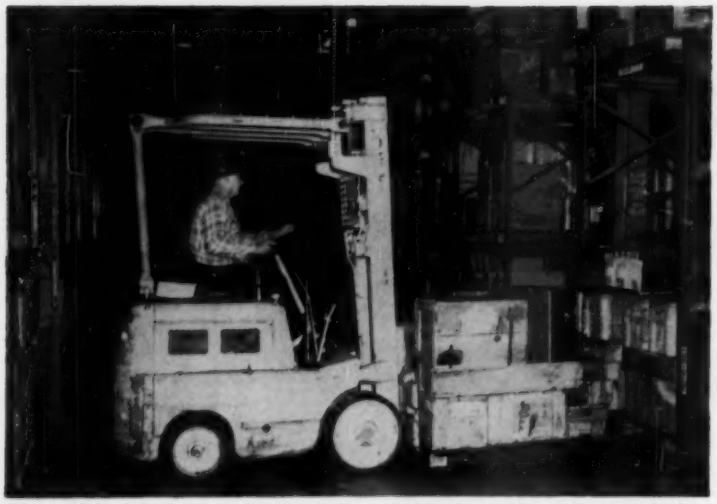
5. The finish should be non-slippery.

6. The finish must not mar, scratch or flake off.

7. The finish must be of such quality that if it becomes necessary to touch up worn spots, it can be accomplished without complete refinishing.

8. The finish (sealer) should be resistant to water.

(Continued on page 18)



This model of fork truck is especially suitable for wide aisles and it is designed to handle palletized loads in rack type warehousing widely used.

Here, a fork lift truck is fulfilling another of its varied functions, that of assisting in the transfer of supplies from one ship to another while at sea.

This picture shows a fork truck which is used particularly in warehousing operations such as are involved in transporting and storing bottled gases.

by **CHESTER J. HEINRICH**
Chief Engineer
U. S. Naval Supply Research & Development Facility
Bayonne, N. J.

MATERIALS HANDLING SERIES
other articles Jan. & March

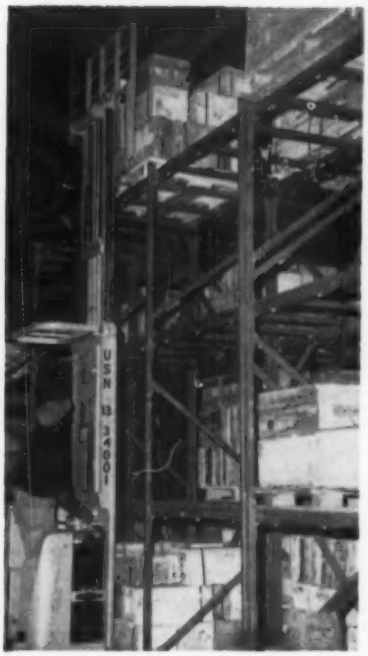
PLAN SAFETY INTO

Advance planning for materials handling safety is dependent upon: 1. the recognition of possible sources of danger from both a mechanical and a personnel standpoint; 2. the initiation of action to reduce those potential trouble sources to the very minimum; and 3. the providing for constant "checking" and "follow-up" to assure that the program is actually operating as planned.

Let us first consider the mechanical features of materials handling equipment. By far, the greatest number of units in usual handling operations will be "fork lift trucks." The present discussion will therefore be confined to this single item which can be broadly considered as being very important, and also representative of all handling equipment.

The requirements for fork trucks, which have evolved from practical operating experience, have produced a self-powered unit upon a fairly minimum wheelbase, "athwartships," as well as fore and aft, and with minimum fore and aft counterweighting. The safety engineer will recognize the disadvan-

Below and right: A straddle-type fork lift truck, designed for pallet storage on racks—and with narrow aisles. Overhead guard on truck should be noted.



MATERIALS HANDLING

tages of such minimal arrangements. However, practical and economical considerations in the form of high costs of warehousing space require that the materials handling equipment be as small as possible to handle a rated load and still operate and maneuver in a minimum space. The necessary aisle widths to accommodate equipment is a very important item as far as warehousing costs are concerned.

The only means possible to secure safe, successful, and economical operations of such equipment, under the required design limitations, is to see:

that the equipment is properly designed and maintained,

that the operators are physically capable, including mental capabilities,

and that they are schooled and trained so that they will have an expert knowledge of the technical requirements for their positions.

In addition, safety and operational supervision must be exercised to make certain that lessons and instructions once learned are properly followed and are not forgotten.

It is upon such a foundation that the Armed Forces have developed their programs of advance planning for materials handling safety.

Planning for Safety

Of the major design limitations for fork lift trucks, it is necessary first to realize the limitations of fore and aft stability. Most manufacturers design their fork truck equipment so that the counterweighing will balance a load between 125 per cent to 135 per cent of the rated load at the rated distance from the heel of the forks. This means that when you have a rated load for a particular fork truck on the forks, a reserve capacity of from 25 to 35 per cent of that load acts as a safety factor **under static conditions.** When the fork truck is moving forward and decelerating under a rated load, this safety factor is drastically cut. As the rated load is raised higher and the fork truck deceleration increased, it is readily seen that the safety factor is rapidly reduced and the fork truck is in danger of forward tipping under these conditions.

High lift fork trucks are quite stable with rated loads lifted approximately 48 inches above the floor while moving under normal operating conditions. Although Navy fork trucks can tier rated loads to their maximum lift capacity, this has to be undertaken with care. In our warehousing operations, pallet loads are commonly stacked 4 to 5 pallet tiers high, but it will be noted that considerable care is taken when the load is raised more than 48 inches above the floor. Operators can become skillful with practice, and good men can make high lifts during forward runs if they are careful in their braking actions.

Sidewise stability must also receive consideration since a nonskillful operator can easily overturn a fork truck with a quick turn at high speed.

Occasionally in the past, certain manufacturers' designs of equipment had to be changed because of unsafe operating conditions; but, fortunately, such instances are decreasing and now becoming rare.

Performance Test

Fork trucks, even of excellent design, however, require maintenance, even as any well-used production tool. In the Armed Services, such maintenance is usually provided by a preventive maintenance program.

In the Navy Department, accurate records are kept of the life history of each piece of equipment. "Use" lives of each type of equipment are projected into the future, based on past experience. When repair costs exceed standard figures, the equipment is disposed of. The preventive maintenance service and inspection system usually locates required repairs and maintenance needs before they can become serious enough to cause an accident or seriously affect other operating parts. Such service and inspection generally occurs in three phases.

The first service and inspection occurs either after each 40 days of operation, or 100 hours of use or the use of 100 gallons of gasoline. This is a routine examination covering normal, possible, early items needing attention. This inspection and service normally requires about one hour to accomplish.

The second service and inspection occurs after 40 days and with the use of either 200 gallons of gasoline or 200 hours of work. This examination is more extensive and requires approximately four hours of a mechanic's time to accomplish.

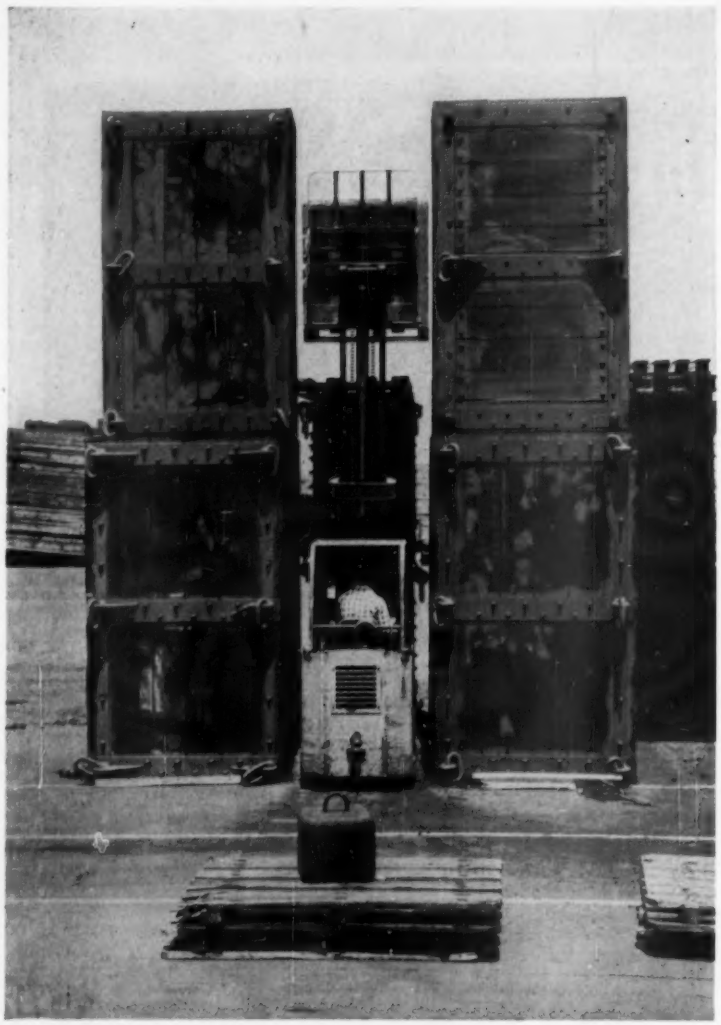
The third service and inspection occurs as an annual event or after 1,200 hours of use or the use of 1,200 gallons of gasoline. This examination and servicing is a very detailed one and requires approximately eight hours for a mechanic to accomplish.

For the performance of necessary repairs, standard times have been established for each model of equipment so that these repairs can be checked for efficient accomplishment.

Planning for Training

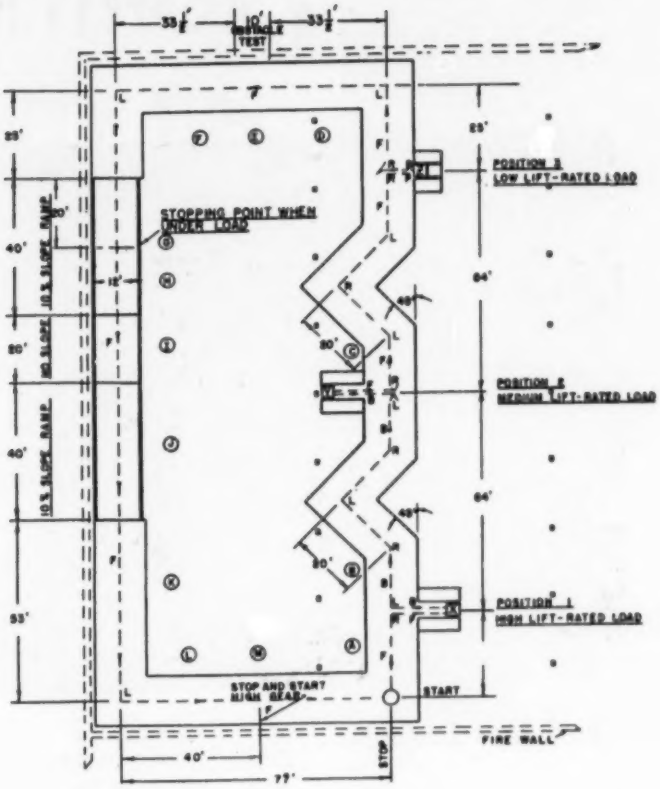
In addition to the above indications of advance planning necessary to provide safe working equipment, planning must also include a program for testing prospective operators in regard to physical and mental capabilities for the operation of mechanized equipment, as

Over-all view of test course used to make certain fork trucks will fulfill requirements of Armed Services before production contracts are accepted.



The rated load-lifting test is undergone by a fork truck during Navy preproduction testing, a searching examination of models under considerations.

For Fork Trucks



The layout of the performance course for testing reproduction models of electric and gas-powered fork trucks designed to fill special purposes.

Fork lift truck is given braking, stability tests under rated load conditions. Models must undergo variety of tests satisfactorily before being accepted.

well as for the proper "on-the-job" training of selected prospective operators. Such on-the-job training is uniform throughout the Department of Defense for civilian personnel and may also be used for the training of military personnel. Upon completion of prescribed courses, certificates of qualification are given which are recognized by all Department of Defense installations.

First, experience and mechanical aptitude tests are used to select prospective operators. Selected candidates then are given physical examinations requiring vision tests, including field vision and color vision, and also reaction timing (eye to foot). Each operator must be physically capable of performing his work duty.

When a man has been physically qualified, he is given classroom instruction covering general usage of the equipment, how it fits into the general handling scheme, how and why it operates as it does, differences between different types of machines, mechanical construction, operating parts, gauges and their use, information concerning the maintenance program and an explanation of the results of misusing fork trucks. The inclusion of worn and broken parts to illustrate the additional cost incurred as a result of improper operation of equipment has been found to be very effective.

In the classroom, information is also given concerning the calculations involved for determination of safe loading capacity. Following this, explanations are given of the details of warehousing procedures. This includes a discussion of warehouse aisle widths, fire aisles, first aid, fire fighting equipment, alarm boxes, sprinkler system, receiving areas, packing areas, methods of palletizing and stacking, safety rules and the meaning of Interstate Commerce Commission and Coast Guard labeling of hazardous commodities.

Following the above, "Fundamental Operating Instructions for a Fork Truck" are provided by instructors with demonstrations and actual use of fork trucks. The trainees then operate the equipment under supervision for proper training and practice and progress from simple to more difficult

maneuvers. Upon successful completion of the fundamental course, the trainee moves to the "Advanced Course of Instruction" where the "tricks of the trade" are shown and where the differences between inefficient and efficient methods of fork truck operation are demonstrated.

Considerable time, thought and energy has been expended in the "Advance Planning for Materials Handling Safety in the Armed Services Operations."

Operational results of such planning have been very encouraging to the Navy and to the rest of the Armed Forces. We recommend a similar solution to like problems encountered by private industry and will be pleased to assist in such a program insofar as industry may desire. It is frequently found in materials handling engineering, because of the magnitude of the Armed Services Operations, that it is possible to make detailed investigations of problems in this field far more extensively than could be economically justified by relatively smaller operations in private industry. Since industry through taxes finally pays for all military research, it is only fitting and proper that the military cooperate with industry in the solving of mutual problems where this is possible. I know, too, from practical experience of the very many ways in which private industry has assisted the military operations with which I have been familiar.

From an address presented at the 44th National Safety Congress. Official U. S. Navy Photos: U. S. Naval Supply Research & Development Facility, Bureau of Supplies & Accounts, N. S. D., Bayonne, N. J.

Floor Maintenance
(from page 13)

9. The finish, after application, must not present a maintenance problem. It must assure economy and maintenance so as to eliminate constant resanding and complete refinishing.

Just a few short years ago, the cost of the floor was based largely upon initial expenditure. Today there is a much wider realization of the other important factors to be taken into consideration. The life of the floor and cleaning and maintenance costs are certainly important factors and it is significant to see that management people realize that the inital cost of a floor means nothing until measured in terms of the number of years in its lifetime. Using this reasoning then, the cost of the floor shown in the picture was extremely high—for had this floor been treated according to MFMA recommendations and with products approved by MFMA there would have been many years of life left in this floor.

Material by courtesy of Hillyard Chemical Co.
Editor's Note: Watch for the article next month, "How Poor Maintenance Ruins Asphalt Tile Floors."

Safety Maintenance SALUTES

A SAFETY IDEA

Skid-Resistant Cartons

A greatly improved skid-resistant shipping carton, treated with colloidal silica, is a recent innovation of the Nekoosa-Edwards Paper Company. According to company spokesman Donald Soe, the need for effective skid-resistant cartons has increased with the development of modern materials handling methods, involving palletized loading, fork trucks, higher stacking and more rapid transit.

Nekoosa took its first step to combat the universal warehouse problem posed by falling boxes approximately two years ago. While the situation was by no means critical, it was obvious that some improvement could be made. Tops and bottoms of shipping cartons were mechanically roughened, which usually imparted some degree of slip resistance.

In an attempt to increase the effectiveness of its anti-skid measures, the company's laboratory examined various chemical treatments. After thorough testing, it was noted that DuPont's "Ludox" colloidal silica gave 50 percent more skid resistance than mechanical roughening, did not deteriorate with age, and was only slightly affected by repeated rubbing.

Safety was one consideration prompting Nekoosa's actions, since a toppling box is always a safety hazard. Stacking is now easier and safer since piles tend to stand straighter. In addition, cartons seal more easily and more firmly.

Picture by courtesy of E. I. duPont de Nemours & Co., Inc.

SAFETY TIPS FOR THE MACHINE SHOP

by **PAUL C. ZIEMKE**

Even the best managed shops have accidents, although their number is well below that of the less cautious owners. The casual accident, however, usually points up the fact that something was wrong—something was taken for granted. The following rules and regulations are designed to cope with the average situations found in machine shops.

Care & Operation of Power Tools

Manufacturers' instructions cover all essential details of their machines, but this literature must be preserved so that it is available for the life of the machines. These instructions cover operation, cleaning, lubrication, adjustment and maintenance. Supplemented by technical handbooks, they provide comprehensive information on most phases of shop management and practice. Notices should be attached to each machine to encourage operators to consult the instructions and manuals.

In order to assure proper operations for the equipment at all times, the following procedure for cleaning and lubricating should be used during each weekly inspection:

1. Wipe all exposed finished surfaces with a clean wiper and remove any indications of rust, coagulated grease-oil, or dirt.

2. Oil and grease the machine according to the manufacturer's instructions and apply a thin film of oil to the finished surfaces to prevent rust.

3. Operate all carriages, tables, rails, heads, rams, and turrets by hand to make sure that they are free to move before applying power. Operate the machine under power to the full travel of the various parts to assure full distribution of oil throughout the machine.

4. Wipe off all excess oil and grease, even in the hard-to-get-at-places. Then stow the lubricating materials in a proper cabinet and all waste rags in a sealed can to prevent fire from spontaneous combustion.

Coolant systems, electrical equipment, and driving belts should be inspected and cared for as follows:

1. **Coolant Systems:** Coolant systems should be drained of sludge and sediment on a regular monthly schedule; oftener if necessary.

2. **Electrical Equipment:** All electrical equipment, including switches, motors, and controllers, should be inspected by an electrician, and cleaned and maintained in accordance with a prescribed routine.

3. **Driving Belts:** Driving belts should be inspected monthly for wear and slippage, and should be kept free from oil and grease.

Safety of Operators

Supervisors should exercise continuous diligence to enforce compliance with safety rules and practices. The following safe practices are applicable to all types of power driven tools and should be used by all machine operators to avoid acci-

(Continued on page 22)

IMMEDIATE DELIVERY...

The Only Work

ON—THE—SPOT EXPERT ANSWERS

to problems like these:

- **What is the right eye protective device for each hazard . . . when should it be worn . . . how can you select for best results and greater economy? (Did you know there are more than 45 different types of goggles, each one designed for a different hazard and use?)**
- **What are the safety and maintenance factors of specific paints . . . the importance of the Color Code and where to use red, green, white, orange and even purple . . . who specializes in such paints?**
- **What are the most economical types of materials handling equipment for you?**
- **What is the importance of a uniform code for safety signs and signals . . . where can you find materials which will fit a planned program?**
- **What are the essentials for hand soaps and cleansers to protect the skin . . . the types of protective creams to prevent skin rash?**
- **What are the various types of electrical equipment approved by the Underwriters' Laboratories for specific conditions of hazardous gases, vapors and dusts . . . who makes them?**
- **What are the vapor hazards of flammable liquids . . . what fire prevention containers and equipment will do exactly the right job?**
- **What is the range of protective clothing, such as 70 different types of protective gloves . . . the specific merits and uses of each one—which is the very best for you?**
- **What can you save in time, money and production by selecting the right ladder for an operation?**
- **When will awards and placques speed up production?**

These are just a few questions suggested by only a few pages of more than 600!

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Machine Shops Tips

(from page 19)

dents involving themselves and other personnel:

1. Do not attempt to operate a machine with which you are not familiar.

2. Before operating a machine make sure there is plenty of light to work by.

3. Be sure that machines are properly lubricated before starting.

4. Shut off the power supply on machines before attempting repairs or adjustments. See that the main switch is locked against others.

5. Do not allow machines to run unattended.

6. Never lean against a machine that is running.

7. Machine guards must be kept in position at all times unless removal is authorized by the supervisor.

8. Machine guards must be replaced after repairs or inspections have been completed and before the machine is started.

9. Do not distract the attention of a machine operator.

10. Loose or torn clothing, gloves, neckties, long sleeves, wrist watches, wrist bands and neck chains must not be worn by the operator.

11. If clothing becomes caught in a machine, cut off the power at once. The control should be placed with this thought in view.

12. When using portable electric equipment around machine tools, special care should be taken so that electrical cords are clear of moving parts.

13. When necessary, work pieces should be securely clamped to the machine.

14. The recommended depth of cut, cutting speeds, and feeds should not be exceeded.

15. Areas around machines should be kept clear of obstructions and in non-slippery condition.

16. Remove chips with a brush or other suitable tool, never by hand or with compressed air.

17. Always wear goggles or a face shield when grinding or when there is danger of flying chips.

18. Do not operate electrically-powered portable tools without a third, or ground wire connection between the metal case of the tool and earth.

Another Accident Checked ✓

At the Radford Arsenal, Va., plant of The Hercules Powder Co., another eye was saved by the wearing of safety eyewear. Harold L. Wright flung a piece of steel shaft into a scrap bin. Landing with considerable force, the discarded metal dislodged a piece of key stock which flew back up, completely shattering the right lens of Wright's safety glasses.

Picture by courtesy of "Wise Owl News."

19. Grounding circuits of all portable electric tools must be checked for continuity between metal cases of the tools and the ground prongs of the cord connection plugs. Alligator type clips for the ground end are not considered adequate.

Precautions for the Maintenance of Machinery

1. Before applying power to a machine, be sure the machine is ready for starting. For example, move the carriage of a lathe by hand feed to assure that all locking devices have been released.

2. Do not lay work or hand tools on the ways of a machine.

3. Be careful to avoid scoring the platen of a planer, or drilling holes in the table of a drill press, or gouging the vise or footstock of a milling machine.

4. Do not use the table of any machine for a work bench.

5. When using a tool post grinder on a lathe, cover the ways or other finished surfaces to protect against grit.

6. Pneumatic power driven tools should be lubricated after each eight hours of operation, or more often where found necessary.

7. Before an electric power driven tool is issued from the tool crib, it should be carefully examined for mechanical or electrical defects. For the latter the dielectric or insulation test with no less than 250 volts is required.

8. The cord should be free of splices, bare or worn spots, oil rot, or brittleness due to over-age or exposure to excessive heat. It should be the right size for the load and be equipped with male and female, three wire attachment plugs of an approved design.

9. When an extention cord must be used in addition to the cord on the electric tool or equipment, the extension cord must not be energized when the tool is plugged in or removed.

10. Spring loaded switches are recommended for the electrically powered tools so that instant stops are possible as an operator loses his grip, etc.

11. If the shop has mono-rail equipment, see that the chain-falls or electric hoist hooks and controls are well out of the way when work is commenced on any of the machine shop equipment.

12. Provide the proper type grinding wheels according to the machine manufacturer's recommendations. Label and store them carefully in the cribs.

Picture by courtesy of Westinghouse Electric Corp.

Lighting Experts Meet at March Exposition

The greatest collection of lighting experts will be assembled at New York's Coliseum March 1–4, at the Second National Lighting Exposition, bringing together in one central market place a complete cross-section of the entire lighting industry. According to Harold R. Meyer, president of the National Lighting Expositions, over forty-five nationally known experts representing all facets of the industry will take part in the twelve panel discussions to be centered around the Exposition's theme "New Dimensions for the Foot Candle."

Reservations Required

Due to the great interest in these symposiums from within the industry itself and in correlated professions of interior design, architecture, building or industrial design, no one will be admitted without prior reservations. Tickets are now available at the show headquarters, 550 5th Avenue.

The Second National Lighting Exposition will formally open on Sunday, March 1st, with a keynote address by George J. Taylor, President of the Illuminating Engineering Society. Panel discussions, on vital topics concerning all classifications of the lighting industry, will begin on Monday, March 2nd. The theme of the opening discussion will be "Where Are We Going In Lighting?"

Further topics to be discussed are Office Lighting, Street and Highway Lighting, Light and Architecture, Institutional Lighting, Lighting for Selling and Color, Polarization and its Relation to Lighting, The Blackwell Report, New Ideas and New Techniques in Residential Lighting, Industrial Plants and Factories, Outdoor and Recreational Lighting, and Theatre and Television Lighting.

Over two hundred lighting manufacturers will be displaying their very newest products at the National Lighting Exposition and, a number of non-generic, educational exhibits will be sponsored by such institutions as the Illuminating Engineering Society, General Electric, Sylvania, Westinghouse, and the American Institute of Decorators in free space donated by Mr. Meyer. Also among the unique features at the Exposition will be a 1000 seat theatre for the showing of "How To Sell Lighting," a film produced by the Academy of Lighting Arts.

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Elect New Officers

(from page 12)

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G. Stuart Mansfield, Western Printing and Litho. Co., North Road, Poughkeepsie, N. Y., term expires 1959.

1957 Injury Rates Continue Decline

Final rates for 1957 injuries continued the general decline evident in recent years, according to the U. S. Department of Labor's Bureau of Labor Statistics.

The all-manufacturing injury-frequency rate decreased from 12.0 injuries per million man-hours worked in 1956 to 11.4 in 1957—the lowest rate ever recorded. Rates for construction, trade, transportation, public utilities, and mining also declined slightly, while finance showed little change. In state and local government there were about as many increases as decreases, and in the service industries and among departments of the federal government there were more increases than decreases.

Of the 160 manufacturing classifications for which data were available for both 1952 and 1957, 53 showed decreases in 1957 of 25 percent or more; 59, decreases of 10 to 25 percent; 40, changes (plus or minus) of less than 10 percent; and only 8 reported increases of 10 percent or more. Among the 78 nonmanufacturing classifications, 17 reported decreases of 25 percent or more; 25, decreases of 10 to 25 percent; 27, little change; and only 9 reported increases of 10 percent or more.

The 10 highest-rate manufacturing industries in 1957 were also numbered among the highest in 1952, but each of them had decreased its rate by 5 percent or more since that time. The same was true of most mining and other nonmanufacturing classifications. A few, including such diverse activities as traprock quarrying, roofing and sheet metal contract work, and the Post Office Department showed significant increases. Most of the low-rate industries were also low in 1952, but many of them showed spectacular improvement over the earlier period.

The severity of work injuries, as measured by the number of days of disability for each million man-hours worked, increased slightly for manufacturing, from 712 in 1956 to 754 in 1957. Death resulted from 4 of every 1,000 disabling work injuries in 1957; and some permanent impairment resulted from 68 of each 1,000. However, 92.9 percent of all disabling injuries reported in manufacturing were temporary in nature, with an average of 19 days disability per case. The average for all cases, including standard time charges for deaths and permanent impairments, was 66 days.

Steel Mobilizes Foremen for Safety

The steel industry is mobilizing its foremen to help combat accidents in a bid to better the all-time safety record achieved in 1957 when only 3.48 accidents occurred for every million hours worked.

"Steelways," official publication of American Iron and Steel Institute, says one company already has undertaken the task of giving its 3,000 first-line supervisors 20 hours of intensive instruction in an effort to determine and eliminate accident causes.

The publication says that since 1934 the frequency of accidents at that company had steadily declined from about 8 for every million man-hours worked to less than 3 in 1957. But the company believed that more could be accomplished in the way of preventing accidents.

Seeking clues as to where efforts could best be applied, the company analyzed accident causes in one of its largest operating departments. It was learned that unsafe conditions had had a hand in 34 percent of the mishaps and unsafe acts in 87 percent though in some cases both had had a share. Says Steelways:

"The predominance of unsafe acts suggested that further progress could be made in safety through stimulating the individual to think before he acts. To reach him the company went to its foremen. That it should do so is both a compliment and a challenge."

In the steel mills foremen occupy posts of responsibility. Because they have the job of interpreting management policy while holding the confidence of their men, their work requires them to be spokesman and father confessor, leader and good samaritan.

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STATUTES CONSTRUED—Disfigurement—Disability

An award for permanent disfigurement of the left side of an employee's face was upheld although the employee refused to submit to plastic surgery which could have removed the disfigurement. The court held that, under the statute, an employee would not be entitled to compensation if he unreasonably refused to submit to surgery where the operation would remove a disability caused by the accident; but in this case the disfigurement of the employee's face did not result in any disability and did not impair his earning capacity. Therefore, if the employee elects to go through life marked by disfigurement, it cannot be held that his choice is unreasonable, and does not deprive him of compensation for the disfigurement. Affirmed.

Skoczynski v. Gilberton Coal Co.; Penna. Superior Court. No. 403. November 14, 1958.

DEATH BENEFITS—Head Injuries—Causal Connection—Pre-Existing Condition

An award granting death benefits to the widow and dependent child of a deceased employee was sustained, the court holding that there was substantial medical evidence to support the finding of the board that there was a causal relationship between decedent's striking his head against a machine and his death more than five years later. The court upheld the finding of the board that the head injury aggravated a pre-existing generalized arteriosclerosis so as to precipitate a psychosis which was a factor in and which hastened his death, and was causally related thereto. Affirmed.

Ramos v. Wolf Die Cutting Co.; New York Supreme Court, Appellate Division, Third Judicial Department. No. 1025. November 10, 1958.

HEART CONDITIONS—Pre-Existing Condition

An award to the widow of a deceased employee was affirmed, the court holding that the evidence established that the deceased employee, while lifting and transporting heavy cases of liquor and soda, had experienced pains and other symptoms of cardiac distress and that these activities caused an unusual strain on his heart, already weakened by pre-existing disease, and resulted in an acute myocardial

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infarction and death four days later. Furthermore, the evidence warranted the conclusion that although the work on that day was no more arduous than usual, it was sufficiently strenuous to require more than normal exertion; and that although the decedent should not have been doing this type of work in view of his pre-existing heart condition, this did not negate accidental causation. The court also held that the award was sustainable on the ground that the decedent's continuance of work involving physical exertion (after he suffered an attack in the course of his employment) was sufficient identification of the event in time and circumstance to constitute an accident where it is followed soon after by a serious coronary condition and both are associated by medical opinion. Affirmed.

Pauson v. Manger Vanderbilt Hotel; New York Supreme Court, Appellate Division, Third Judicial Department. No. 992. Nov. 11, 1958.

HEART CONDITION—Fright—Compensable Accident

An employer owned an office building and the claimant was employed as an office cleaning woman. Sometime prior to the accident, a prowler had been seen about the premises. As a result, the cleaning women in the building were ordered to keep the doors in the office locked when they were working therein. The claimant locked the door. However, while she was cleaning one of the offices, the door suddenly opened and she heard footsteps behind her. Although the intruder turned out to be the forelady, her sudden and unexpected entry caused her to become acutely frightened. Her condition was diagnosed as acute coronary arterio insufficiency along with other symptoms of a heart attack. The court held that an injury resulting from fright alone is a compensable accident. Affirmed.

Pukaluk v. Insurance Company of North America; New York Supreme Court, Appellate Division, Third Judicial Department. No. 836. November 11, 1958.

Engineers Convene at June Exposition

The engineering world's newest products, processes, techniques, application methods and services will be unveiled at the Engineering Progress Exposition, to be held from June 17–20, 1959 at the Hotel Commodore, New York City. The exposition, sponsored by the National Society of Professional Engineers in conjunction with the organization's New York State chapter, will be a major feature of its forthcoming silver anniversary convention.

During the course of the exposition, the nation's professional engineers representing manufacturing companies, utilities, carriers, contractors, service organizations, governmental agencies, educational institutions and military facilities will survey the best products and services of over 115 companies available for utilization in domestic and foreign projects.

The exposition is the first of its type to be conducted under the management of the Charles Snitow Organization, Inc.

In a message to the professional engineers of the nation, including the 15,000 registered professional engineers in the New York area, Leigh St. John, P. E., president of the New York State Society said that, "This exposition offers the nation's professional engineers an ideal opportunity for exchanging information and experiences, as well as the advantages of reviewing, collectively, the multitude of products and services now available in the market."

Lifting Safety School

The Wire Rope Division of Jones & Laughlin Steel Corporation has initiated its new Safety in Lifting School with a two-day presentation to representatives of leading industries in the Muncy-Williamsport, Pa., area. This unique Safety School will visit industrial plants to teach the proper use of slings in overhead crane operation and to review allied safety principles.

In announcing the formation of the school, Peter P. Somerville, General Manager, J&L Wire Rope Division, said:

"The school will present in a concentrated but complete fashion the type of information that is invaluable in reducing lifting accidents and increasing the efficiency of crane operations."

One of the central features of the school is a model double hook bridge crane on which all the operations of a standard crane can be duplicated. The crane, which is 4½ feet high and eight feet long, has electrically-powered motors which enable the two hooks to be raised or lowered and move the carriage.

The model crane, which is demonstrated on a 30-inch table, is designed so that it can be easily dismantled and set up in plant locations for the school.

The correct hitching techniques will be demonstrated on the model crane by Frank Sherman who has been retained by J&L as a material handling specialist. Mr. Sherman was associated with General Electric in lifting operations for 42 years. He founded and taught the well-known GE Crane School.

In addition to the model crane, numerous other visual aids will be used in the school. These include models of various typical pieces of equipment that might pose lifting problems for a crane operator. Mr. Sherman will demonstrate how these pieces can be lifted safely.

The emphasis of the program is placed on the proper techniques for lifting and turning of heavy materials with maximum efficiency and safety.

Color slides will be shown to illustrate some of the problems involved in lifting. Other visual aids include displays of eyebolts, cable guards, wire rope slings, hooks, clamps, etc.

All of the school demonstration equipment, including backdrops and displays, has been designed so that it can be transported in a station wagon. Present plans call for a fairly flexible school program which can vary in length according to the needs and desires of the companies where it will be put on. However, J&L officials believe that in most cases a full two-day program would be of greatest value.

A gold plaque for outstanding achievement in accident prevention was presented to the construction organization of Pacific Power & Light Company's new Dave Johnston steam electric plant. The construction organization received the award for having worked 511,856 hours without a disabling injury. An average of 252 men worked during this period.

The gold plaque was presented to W. T. Franklin, construction superintendent of the project by K. W. Reece, executive vice president of Ebasco Services Incorporated, engineers and constructors for the Dave Johnston plant. The gold plaque is the highest award presented by Ebasco to construction organizations and is given each year to that organization whose Injury Index is the greatest percentage below the national average. The award year runs from July 1 to June 30, and to be eligible a project must have worked at least 100,000 hours during that period. The construction organization of the Dave Johnston plant had a perfect safety record, which is an unusual achievement.

• • •

The York Division of Borg-Warner Corporation worked 1,287,217 man-hours without a disabling injury in the period of July 28 to October 31. A plaque recognizing the accomplishment has been presented to the division by the Pennsylvania Manufacturers Association Casualty Insurance Co. This is the fourth successive year the York, Pa., company has won the plaque, and the division also holds the Pennsylvania state record of 4,772,907 man-hours without a disabling injury.

• • •

In recognition of its 25 years of membership with the National Safety Council, the American Bottlers of Carbonated Beverages received a citation from the Council at the 1958 International Soft Drink Industry Exposition and Convention in Atlantic City, November 17–20.

The citation was presented by John T. Curry of the Council to T. L. Wilson, Chairman of the ABCB Safety Committee. The award followed the Safety Committee Report of a recent survey which revealed opportunities for accident reduction in the soft drink industry.

Mr. Wilson was recently appointed Chairman of the newly created Soft Drink Division of the National Safety Council's Food Executive Committee. Serving as Vice-Chairman of this group is Mr. Leonard Radaj, Personnel Manager of the John Graf Company, Milwaukee. Harry Korab, Technical Service Director of the ABCB will serve as Secretary of the newly formed division. The report states that the job of this committee will be to guide the National Safety Council in providing materials and services that will be of the greatest advantage to the soft drink industry.

• • •

The Ottawa, Ohio, television picture tube plant of Sylvania Electric Products, Inc. has completed a record of 2,275,178 man-hours without a disabling injury. The record of two million man-hours, unusual for manufacturing operations of this type, was brought to an end on October 30 when an employee lost a day's work from an acute back strain. The plant had operated from September 29, 1957 through 283 working days without a disabling injury.

Recently, W. H. Lamb, Sylvania vice president and general manager of Picture Tube Operations, awarded a plaque to plant manager H. K. Kindig and safety engineer R. J. Howe of the Ottawa plant for the achievement of the two million man-hours safety record. Sylvania operates plants in Ottawa, Ohio; Seneca Falls, N. Y.; and Fullerton, Calif.

• • •

National honors for outstanding drivers' safety performance have been won by the Marion, Ind., plant of the RCA Electron Tube Division in the twenty-seventh annual National Fleet Safety Contest conducted by the National Safety Council. RCA's Marion fleet, consisting of twenty-six vehicles and twenty-seven drivers, received first place in the Private Carrier Truck Division of the contest.

The award was based on RCA's safety performance from July 1957 through June 1958. During this period, the Marion fleet had no accidents. A special plaque was presented to J. J. Eakins, Manager, Traffic, RCA Marion Plant and Warehouse. The award was made by E. G. Cox, Chief of the Motor Carrier Safety Section, Interstate Commerce Commission.

Third Quarter 1958 Injury Rates Rise

The all-manufacturing injury-frequency rate rose sharply in the third quarter of 1958 to 11.5—up 11 percent from the preceding quarter's rate of 10.4, according to the U. S. Department of Labor's Bureau of Labor Statistics.

The June to September change—usually a rise—was the sharpest on record for the period. Most of the increase came in July—up 8 percent from June; and the customary September improvement was much less than usual. The June rate for 1958 was 9 percent below the 1957 level, while the September rates were identical for 1958 and 1957.

Injury rates during the first 6 months of the year, however, had established record lows, 9 to 14 percent below the previous year. Consequently, the average for the first 9 months of 1958 was 9 percent below the corresponding figure for 1957.

The rising pattern of injury rates for the third quarter was not reflected uniformly among all industries. Less than half (61) of the 135 industry classifications for which comparable data were available showed increases of 1 full frequency-rate point or more between the second and third quarters of 1958; decreases of 1 point or more were recorded by 19, and little change by the remaining 55 industries. In the food, textile, lumber, furniture, and paper groups, however, over two-thirds of the reporting industries showed increases of 1 point or more.

The most outstanding increases were recorded for poultry dressing and packing; sausages and other prepared meat products; logging; millwork and structural wood products; concrete, gypsum, and mineral wool; and fabricated wire products.

Individual industry averages for the first 9 months of 1958, however, compared favorably with those for 1957. Of the 138 comparable classifications, 72 recorded decreases of 1 full point or more, and only 11 showed corresponding increases, while 55 changed by less than a full point.

Industries which achieved rates of less than 5 injuries per million man-hours increased from 18 for the first 9 months of 1957 to 20 in 1958. The most outstanding records thus far in 1958 were: radio tubes; synthetic rubber; synthetic fibers; explosives; electric lamps (bulbs); aircraft; tires and inner tubes.

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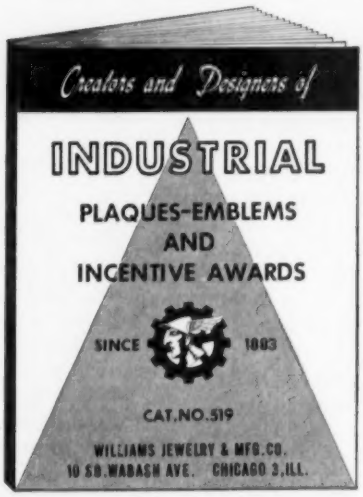

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Study on Standards For Floor Absorbents

The oil absorptive characteristics of floor absorbents will be studied and research data collected in a cooperative testing program now initiated by ASTM Committee C-23 on Sorptive Mineral Materials. The program will involve running five replicate determinations on three coded floor absorbents using five recognized test procedures. From this study it is expected that an ASTM standard method will be developed based on the information collected.

This is only one phase of the standardization program launched by one of the newest members in the family of ASTM technical committees, the committee having been organized in 1957. A survey of consumer practices has given valuable information and guidance to the committee in selecting work projects. As a result, projects on the agenda of the committee will include the development of methods on sampling and sieve analysis, and for determining such properties as free moisture, loss on ignition, bulk density, absorptive properties, dust content, resistance to breakdown (oil, water, mechanical), slipperiness, ease of removal, fire resistance, solubility in water and abrasiveness.

The development of definitions of terms represents another phase of activity in the committee for which a subcommittee has been organized.

Persons or organizations interested in the work of the committee are invited to write to the Secretary of the Committee: R. L. Shirley, The Eagle-Picher Co., Insulation Div., 900 American Bldg., Cincinnati 1, Ohio.

industrial hygiene

Industrial Health-Safety Program

An active and sustained program to help employees become health conscious can sharply reduce the illness rate, according to Dr. Thomas H. Hogshead, medical director of Du Pont's Engineering Department in a speech to members of the American Society of Mechanical Engineers.

At the close of World War II, a survey of the health of Du Pont engineers disclosed "a critical situation, particularly in the area of cardio-vascular disorders. An active health program geared mainly to the prevention of heart trouble and related disorders was put into operation . . . The health record changed for the better almost immediately."

Following consolidation of the Engineering Department in a new headquarters building outside Wilmington in 1953, the Medical Division launched a broad program designed to help employees become health conscious.

As evidence of its success, Dr. Hogshead said, "With an average of 2,500 men and women over the five-year period, 1953–1957 . . . our sickness absenteeism is 1.3 percent of the total hours scheduled for work. The average for comparable industrial groups is usually some two to three times this figure."

The Medical Division is equipped to handle the emergency situation, "But our program is geared to prevent emergencies from ever happening. This makes it desirable for us to be in contact with the employees as frequently as possible." Employees paid an average of 10 visits each to the Medical Division in 1957, and services include annual physical examinations, preventive inoculations, and other activities.

Emphasizing the important role of supervision, Dr. Hogshead said, "Although a supervisor is not expected to be an amateur doctor, he is made to feel it is part of his supervisory responsibilities to be alert to the need of employees for health attention, and to direct them to where help can be found.

"A supervisor is in the best position to stimulate employees under his direction to accept the idea that good health is a necessary part of good performance . . . As a result," he said, "health problems usually come to our attention in their very early stages when they are much easier to treat than in later stages. Either the employee or the supervisor can come to the Medical Division when a problem arises, and no appointment is necessary."

"One factor of considerable help to the Medical Division in launching its program," Dr. Hogshead said, "was the company's traditional concern for, and insistence upon, safety. It is an accepted responsibility of Du Pont management and supervision to carry on an insistent, continuing program to instill the desire for safety, and the consciousness of safety into the minds of every employee."

"The safety program over the years," Dr. Hogshead said, "had conditioned the personnel of the Engineering Department to recognize that good health also is basic to security. There can be no safety conciousness without its companion—health consciousness—and the reverse, no doubt, is equally true."

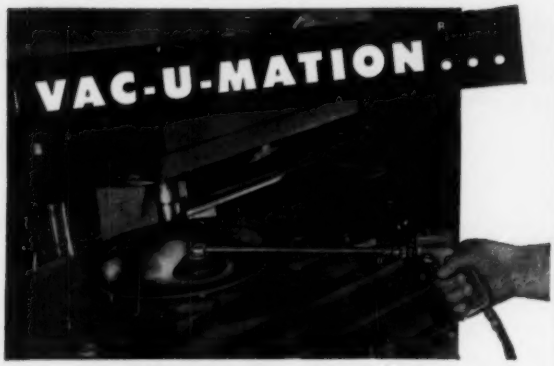
As an indication that safety consciousness and health consciousness complement each other, Dr. Hogshead said, "The organization achieved a safety record during the five years of only one lost-time injury during some 25 million exposure hours. Had our experience been no better than the national average, we would have had 125 serious injuries.

"Although the people in the organization travel an average of 26 miles a day to and from work, mainly by private automobile, they did not have a time-losing injury on the road during 400 calendar days in 1956–1957. The national experience for this period would indicate 23 time-losing injuries."

Chemical Industry Fights Pollution

A quarter billion dollar annual expenditure for the control and avoidance of air pollution by the nation's chemical companies alone was cited recently as only one of the many contributions of the industry in this vital area of public concern.

Gen. John E. Hull, USA (Ret.), reported the figure when he told of accomplishments in air pollution control or avoidance by the chemical industry at the National Conference on Air Pollution called by the Surgeon General, Public Health Service, U. S. Department of Health, Education and Welfare. Gen. Hull is president of the Manufacturing Chemists'



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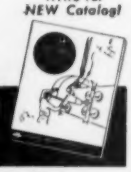

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(For details, use Key # B-9 on card on page 1)

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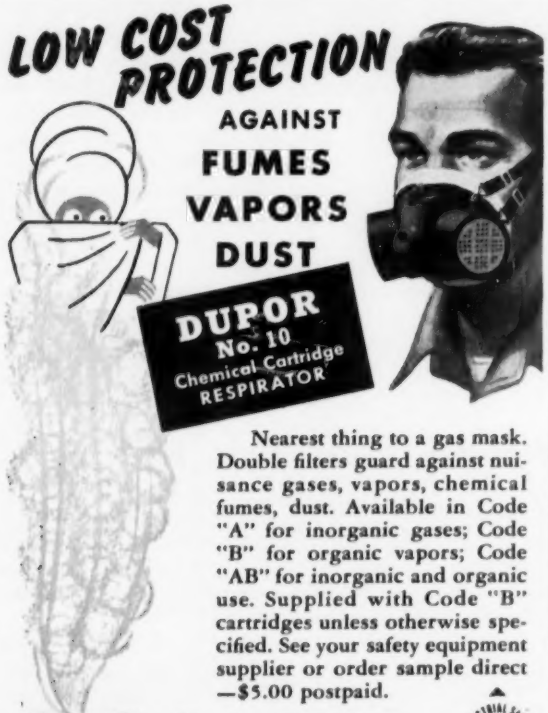

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Association, an organization representing 95 percent of the U. S. chemical production capacity.

In addition to citing the past accomplishments of the industry, Gen. Hull also called for proper consideration of a wide variety of complex problems when necessary public controls are being studied.

These problems include, "A technology which is still far from complete; geographical units which may ignore political boundaries, and many of which have problems peculiar to themselves; the great number of sources and kinds of air pollutants, many of which are not caused by man; the income sources of a community and industrial employees; and even the vagaries of the weather."

Gen. Hull attributed much of the industry's advanced position in the field to economic as well as broad scientific understanding of the entire problem. He pointed to the high cost of control equipment and processes and added that the "costs of goodwill, public relations, plant location, and compliance with regulations come high for the chemical industry, and therefore, it is good business for the chemical producer to avoid air pollution as much as possible."

Gen. Hull said that honest public understanding is essential to solving these problems and is the responsibility of scientists, industry, the press, or any others communicating on pollution.

In commenting on what the industry has accomplished, he pointed out that the avoidance of air pollution and the proper use of air already are simple conditions of doing business for a chemical producer. "Any chemical producer today knows that he cannot use a process which will endanger the health, safety, comfort, or property of his neighbors," Gen. Hull continued.

Industrial Dermatitis

"Dermatitis in Industry, a Pilot Study with Special Reference to Oils as a Causative Factor," by Daniel C. Braun, M.D., and Rosedith Sitgreaves, Ph.D., has been published as a pamphlet by the Industrial Hygiene Foundation.

This report represents current research on one of the long-time major problems in industrial medicine: dermatitis attributable to an occupational cause. In their study Braun and Sitgreaves attempt to estimate the incidence of occupational dermatitis, particularly those cases in which oil may be a major factor. Their final conclusions show that over half of those cases reported could be traced to oils and grease.

Results for the paper come from close study of industrial conditions throughout the country. In a random sampling of 36 plants and 103,586 employees, representing five geographical areas and eight industrial categories, the authors worked closely with medical authorities of the industries to keep an accurate record of disease, cause, type of industry, age and sex of the person, and so forth.

A report of the study and the final conclusions are presented in graph and text of IHF pamphlet. Copies of the report are available from the Industrial Hygiene Foundation, 4400 Fifth Ave., Pittsburgh 13, Pa.

A radiocontrol technician, clocking for radioactivity near atomic reactor, always keeps a supply of paper wipers handy.

CONTAMINATION CLEAN-UP

Disposable wipers provide radiation safety.

A brand new industry—atomic energy—is capitalizing on the versatility of disposable paper wipers. Plant personnel at the world's first full-scale nuclear power plant, owned by Duquesne Light Company, Pittsburgh, and the U. S. Atomic Energy Commission, have found paper wipers increasingly useful for applications in decontamination work.

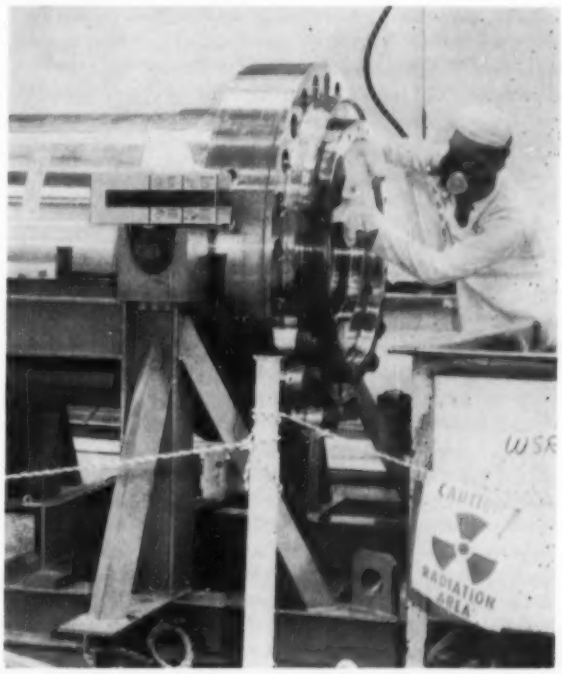
Located at Shippingport, Pa., the plant has carried a stock of the wipers since May 1957. A lint-free, durable wiper was considered essential for cleaning metal surfaces of reactor parts. Personnel also used them to wipe their hands and faces.

Advantages Demonstrated

Paper wipers were selected for the atomic plant based on Duquesne Light's experiences with them at the Brunot Island power station on the Ohio River near Pittsburgh. These experiences helped prove the advantage of using a paper wiper to its maximum utility for quick and efficient maintenance. And, low unit cost of the wipers makes it economical to use a fresh, clean one for every application.

Since the atomic reactor was put into operation at the end of 1957, wipers have been used by maintenance personnel in the decontaminaton area where equipment is scrubbed down and cleaned for service. Equipment such as coolant pumps must be scrubbed for hours to reduce radioactivity. After the final scrubbing with a chemical wash solution, all surfaces are rinsed with water and then wiped dry to prevent corrosion from the air. The wet strength of the wipers makes them practical for this application.

(Continued on page 34)



Paper wipers, easily disposable, play part in maintenance of this atomic reactor coolant plant, cut contamination danger.

by **HARVEY W. BELLOWS**
Assistant Safety Engineer
Todd Shipyards Corporation, Brooklyn Division
Brooklyn, N. Y.

Safety equipment can be obtained that will provide respiratory protection against most of the conditions which are likely to develop in industry. Such equipment may be required in the performance of routine jobs when it is not practical to provide ventilation. However, when planning work, the objective should be to engineer the job so that the air contaminate is controlled, if at all possible.

Respiratory equipment must be regarded as **essential for emergencies.** It is natural that people dislike inconvenience. It is not surprising, therefore, that some workers will resist wearing respiratory equipment in a non-emergency situation, even if they are quite sure that the equipment is provided for their protection and that if they do not wear it, their health will suffer.

For example, we recently had a ship being repaired where a special hazard in the form of a coating of Saran in the tanks was present. The work involved burning out some plates. Saran, when dry, does not support combustion, but it does disintegrate in heat, giving off toxic fumes that are very irritating. Because of the hazard, we had a safety engineer and a chemist standing by while the work was being done. All the burners who had been assigned to the job were cautioned as to the hazards before the job started, and they were issued air line respirators. Within fifteen minutes after they started burning, one of the men was observed with the face piece of the respirator down around his neck instead of over his mouth. Before the supervisor could get to him, he came out from under the ship coughing and gasping. We asked him why he had removed the face piece and we got a typical answer: he wanted to see if it was as bad as we had told him it was. The word got around fast that it was, and we did not have any more difficulty on that job. Because of the resistance to wearing protective equipment, every effort should be made to limit its need on production work, consistent of course with safety.

Reasonably Sure System

We have developed a reasonably sure system to control the hazards which are numerous in our line of work. When a ship arrives in the yard, a certified chemist makes a complete check of the areas where work is to be performed in confined quarters, and issues a certificate that the area is safe for men and fire or both. No one is permitted to work there until the certificate is issued and in the hands of the foreman.

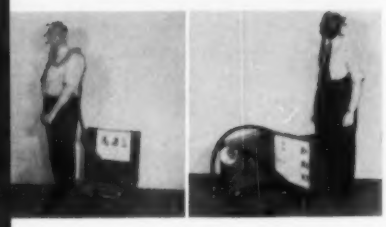
Our system is only "reasonably" sure because we had one interesting experience that shows how all good plans can sometimes go wrong. The chemist had made tests in a tank where work was to be done, had issued the necessary certificate that it was safe for men, and the job started. For two days and two nights the men had worked in the tank and then a cleanup gang was sent in to clean up the debris and sludge in the bottom of the tank. The tank had apparently contained some chemical that was heavier than water, and we believe that this had settled in the sludge and was covered with water. As long as the water was not disturbed, the chemical remained covered and the tests by the chemist were negative for any hazard, but when the cleanup men disturbed this covering, the chemical vaporized, and our men were exposed to dangerous fumes. Our first knowledge of this was right after lunch when one of the men became ill and was removed to the dispensary and later to the hospital. In the meantime, several more men became ill and we realized that something was wrong. We stopped the job, ordered all men out of the tank until we could determine what the trouble was. Fortunately, none of the men were seriously ill, but it did serve to indicate that there is a need for more frequent analysis by the chemist. We immediately revised our job procedure to cover this condition.

On a production job, the selection of respiratory protective equipment is relatively simple. You determine what the problem is, namely: dusts, organic vapors, acid gases, etc. You also are able to tell whether the atmosphere will be immediately dangerous to life, or just a nuisance dust that will slow down production. When the various factors are known, then the solution can be arrived at by referring to an authoritative source.

It is in the emergency field that respiratory protection presents the more serious problems and allows the least time for solving them. Once the need for respiratory protection for an emergency is recognized and the selection of equipment made, using as a standard the United States Bureau of Mines established

RESPIRATORY SERIES
other articles March & April

EXPECT THE UNEXPECTED FOR RESPIRATORY SAFETY



criterion, it is most important that, in addition to the selection of the right equipment, the people who are to use it are fully instructed as to its proper use. That is where many companies feel their responsibility ends, and that is where troubles start.

Let me give a few examples: during the early years of World War II, Civil Defense issued gas masks to Air Raid Wardens, Auxiliary Firemen and others. One night the gas company got two calls close together about a gas leak in a cellar of a multiple dwelling. The Emergency Crew was dispatched and on arrival found the cellar full of gas and a young man all decked out in his new Civil Defense gas mask trying to replace a plug in the end of a tee. He was within minutes of passing out, all because he put his faith in a piece of equipment that had not been designed for that hazard. The man was revived because an inhalator was on the truck and put to immediate use. The plug was replaced in the tee, reports written and while it was never mentioned, several people had an idea that he was trying to by-pass the gas meter.

Train and Retrain

Another interesting case that can teach a lesson occurred in a drug plant where they were processing opium. One of the steps of the operation was spraying Benzol over the raw opium. The Benzol dissolved a part of the opium and drained down into a still. When the still was filled, the operator turned some valves and distilled the Benzol off through a closed system and the residue was scraped out and further processed. Two night operators were running the machine and when the distillation process was started, they figured they had ten minutes to go out and have a smoke. One of the hand hole plates on the still had not been made up tight and Benzol fumes soon escaped into the room.

The plant superintendent, making his rounds of the plant, was overcome when he entered the room. One of the men returned, saw the superintendent on the floor and tried to drag him out. He too was overcome. The other man returned, saw the two men on the floor and called for help on the phone outside the room. He entered the room, opened two windows immediately and then tried to drag one of the men out. He was also unconscious when help arrived. They finally got all the men out, but one was dead and the other two were disabled for a week.

Not All Trained

Investigation disclosed that two all-purpose gas masks had been purchased and installed at the entrance to the room. That day personnel had been instructed in its operation but they had neglected to train the second shift.

It is essential to **train and retrain** all men who may have to use emergency equipment. The training is not only valuable in getting emergencies handled fast, but it is also valuable in getting the right men for the job. We learned while we were training our emergency crew that some of the men were unable to work with the mask over their face. They appeared to have a fear of being confined and were not able to do anything, all their energy and thought being to get rid of the mask. Men who cannot see without their glasses are also poor risks on the emergency crew with certain types of masks.

Here is another incident that points up the need of

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(For details, use Key # B-8 on card on page 1)

training education. A gang of laborers working for an outside contractor recently came aboard a ship in our yard to do some cleaning. The work was in the forepeak, a couple of decks down. The ship had a carbon dioxide fire extinguishing system, with the control on the deck. One of the men, who was late, removed his coat on deck so the boss wouldn't know he was just coming on and hung it on the control handle. The weight of the coat was enough to trip the valve and carbon dioxide flooded the compartment. Contrary to general belief, carbon dioxide does not come through the system into the air in the form of snow as you see it from a carbon dioxide fire extinguisher, but as a colorless, odorless gas. It makes a hissing noise, but that was not noticeable over the other ship noises. One man died from that experience.

It gave our Emergency Crew a practical workout and the self-contained breathing apparatus which we use was just what we needed in an atmosphere that contained practically no oxygen. If the contractor's snapper had been trained, he could have ordered the men out while they were still able to do so.

In emergency work where men don respiratory protective equipment, and enter areas where the atmosphere is hazardous, a lifeline tied to the harness can be of value.

1. It will help in getting the man out if that should prove necessary.

2. It will help in locating him if he needs help.

3. It will help him to find his way out if he becomes lost.

There have been many arguments about what the lifeline should be made of. The promoters of a hemp line say that a thin metal cable will conduct electricity and shock a man, that it will kink and break, that it will rust up and deteriorate in wet conditions. The promoters of the cable say that a hemp line will burn and part in a fire; that if it is dragged over sharp edges, it will be cut through; if it is exposed to chemicals it will rot; and if not used, it will dry out, that it has a comparatively short life anyway and has to be replaced too often. I've seen both used and both have some advantages and disadvantages. The important thing is to have one and to use it.

If respiratory protection is needed for production work where the contaminate cannot be controlled by engineering the job, get your respiratory equipment data, but remember your responsibility does not end with just supplying a respirator. You must set up a program to train your men and practice, practice, practice until you and your men know how, when and where to use proper equipment under any conditions, and at any time.

From an address presented at the 28th Annual Greater New York Safety Convention. Pictures by courtesy of the U. S. Bureau of Mines; on page 33, American Optical Co.

Contamination Clean-Up

(from page 31)

Radiocontrol technicians also keep boxes of the wipers in the reactor area for many general wiping operations. Of importance is the occasional wiping of the bridge drive for the reactor's extraction crane. The mammoth crane spans the reactor pit and moves on tracks that extend along two sides of the pit. It

It is necessary to keep bridge drive of reactor's extraction crane free of dirt, corrosive material to insure readiness.

is used for moving fuel elements in and out of the reactor. Periodic wiping helps assure that the unit is ready for service.

Pictures by courtesy of Scott Paper Co.

IRFAA Elects Officers

R. Herman Weaver of Roanoke, Va., was elected president of the International Rescue and First Aid Association at the IRFAA's three-day 11th annual convention. He assumed office January 1, succeeding Don Dunnington of Bethesda, Md. Conrad H. Kreyling of River Edge, N. J. was elected first vice president; Joseph J. Banach of Marinette, Wis., was reelected second vice president; William J. Amberman of Elkridge, Md., was reelected recording secretary; and Theodore Hart of Plainfield, N. J., treasurer.

Air-Water Pollution Conference

A major Air and Water Pollution Abatement Conference under the sponsorship of the Manufacturing Chemists' Association will be held at the Netherlands Hilton Hotel, Cincinnati, Ohio, March 17–18.

A conference program is being planned which will be of interest not only to those from industry, but also to representatives of governmental agencies which have interests in pollution problems and their control.

Major MCA-sponsored conferences of this nature previously were held in Houston in April, 1954, and in Washington in April, 1957. In the past several years, the MCA has sponsored a series of regional workshops on air or water pollution in various parts of the country for plant personnel of member companies.

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(For details, use Key # B-17 on card on page 1)

Smog Research Progress

Dr. W. L. Faith, managing director of the Air Pollution Foundation has reported that two more years of work by his organization can wind up all the remaining basic research needed for final solution of the Los Angeles smog problem.

"We fully believe that two more years of intensive scientific work under Foundation auspices can provide all the essential facts, so that private industry can take over from that point and produce workable, economic control for auto exhaust and thereby eliminate smog," he said.

Pollution Problems Differ

Faith also emphasized that smog in Los Angeles and other population centers on the West Coast is not the same kind of air pollution as that troubling most other metropolitan areas of the country.

"The low-inversion, low-wind, intense sunshine regime necessary to develop eye irritation from auto exhaust seldom occurs in areas other than the West Coast."

The most common air pollution complaints elsewhere in the nation, Faith reported, are visible smoke and disagreeable odor of exhaust, particularly from buses and trucks; potential hazards of carbon monoxide and nitrogen oxides, and suspicion that auto exhaust contains compounds that may induce lung cancer.

11-8

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"These complaints pose exhaust control problems that are not identical with the auto exhaust problems we are dealing with in our efforts to control photochemical smog—Los Angeles' eye irritation, high ozone concentrations, blurred visibility and plant damage," he explained.

"Accordingly, the solution that will finally be accepted in Los Angeles and for the West Coast may not apply in other communities."

The managing director of the Air Pollution Foundation, an independent organization, said the estimate that two more years will complete the basic research phase of the smog problem "is based on the questions we know must yet be answered about exhaust reactions in the atmosphere, our experience with the number of experiments usually required to answer such technological questions, and an assumption that continued adequate funds will be forthcoming for two more years' intensive effort."

During its five years of basic research, the Foundation has operated on contributions averaging slightly over $500 thousand a year, subscribed by industrial, business, financial and professional firms, trade associations, and individuals.

"The kind of intensive effort we have in mind," Faith said, "will have to be initiated by the Foundation for three specific reasons:

"First, there is no other private research organization that is committed to use its resources for the solution of the smog problem.

"Second, there is nowhere in the country any single laboratory or scientific institute that has the total facilities needed to conduct all the work still required—several, perhaps many, will have to be contracted with by us to do specific jobs.

"Third, no governmental agency has the freedom of action to cut off unproductive work quickly, which is frequently necessary in working toward speedy solution to the smog problem."

Immediate Plans

Keystone of the Foundation's immediate research plans is the relationship between nitric oxide in auto exhaust and certain olefins in exhaust—neither of which, Faith emphasized, is directly related to the gasoline used in an auto. Most of the work will be done in the Foundation's smog chamber at Stanford Research Institute facility in South Pasadena.

Reiterating that successful control of auto exhaust will mean an end to the photochemical smog still plaguing the West Coast, Faith said "any plans of the Los Angeles County Air Pollution Control District to control solvent emissions should be carefully reviewed."

"Present indications are that solvent vapors are not sufficiently reactive to form smog—not only because they are nonolefinic, but also because they never become mixed with the proper nitrogen oxide concentration," he said.

Faith added that the Foundation "expects to get further information concerning this reaction in our smog chamber during the next year" along with its intensified basic research studies on auto exhaust.

transportation safety

Truck Driver Courses

Twelve truck driver courses are being offered by the Extension Division of North Carolina State College during this year. Two of the four-week courses have already been held.

The school's remaining 1959 schedule is as follows: Feb. 23—Mar. 20; Mar. 23—Apr. 17; Apr. 20—May 15; May 18—June 12; June 22—July 17; July 27—Aug. 21; Aug. 31—Sept. 25; Sept. 28—Oct. 23; Oct. 26—Nov. 20; Nov. 23—Dec. 18.

Conducted in cooperation with the N. C. Motor Carriers Association, the courses cover factual information, basic driving skills, and road and city driving in tractor-trailer trucks.

Bulletins describing the 1959 courses are now available and may be obtained by writing the Division of College Extension, Box 5125, State College Station, Raleigh, N. C.

Highway Lighting Guide Prepared

The Safe Highway Lighting Committee of the Street and Highway Safety Lighting Bureau announced publication of the "Highway Lighting Reference Guide." The publication gives, for the first time in printed form, a complete engineering guide on where and how our nation's highways should be lighted.

The publication is based on American Standard Practices for Street and Highway Lighting, as developed by the Illuminating Engineering Society for the American Standards Association, and was prepared because of the appalling percentage of fatal and non-fatal accidents which occur at night on America's highway network. For example, out of a total of 40,000 highway deaths last year, some 30,400 took place on rural roads, with better than 50 percent of these deaths taking place at night. This despite the fact that only ¼ of the total vehicular traffic flow moves at night. Figured in dollars, traffic experts say these accidents create an annual loss of $5 billion.

Engineering Data

The book, designed for use by highway and lighting engineers, as well as all officials charged with the responsibility of providing safe highway lighting, reviews in detail light sources available, fundamentals of design, elements used, light distribution, common types in use, quality specifications, standards and tests, installation and maintenance. Lighting supports, power distribution and series and multiple hook-ups are also evaluated.

Lengthy discussion, with complete position diagrams, is given to intersections and interchanges, connections to service areas, elevated and depressed expressways, tunnels and underpasses, bridges, high traffic density sections, curves and hills, railroad grade crossing and urban area approaches.

Publication of the "Highway Lighting Reference Guide" has been commended by the National Safety Council, the American Road Builders' Association, the Illuminating Engineering Society and the Edison Electric Institute. Copies of the "Highway Lighting Reference Guide" are available at a charge of $1 from the Safe Highway Lighting Committee of the Street and Highway Safety Lighting Bureau, 1400 Terminal Tower, Cleveland, Ohio, or 155 East 44th Street, New York, N. Y.

Turnpike "Standby" Aids Emergency Calls

The New Jersey Turnpike Authority has developed a "unique standby" system for providing emergency equipment for accidents. It has been termed as one of the most practical and effective systems on the nation's highways.

Authority Chairman Joseph Morecraft, Jr., credited the system as a basic factor in keeping the Turnpike's fatality rate among the lowest in the nation. He said that records disclose no instances where lives could have been saved by speedier emergency service.

"Currently, 36 first aid squads and 22 fire departments are included in the Authority's 'standby system'" said Chairman Morecraft. "These units divide the 131 mile superhighway into overlapping areas of responsibility of about eight miles each."

For this service, the Authority makes a substantial contribution every six months to each participating unit. In addition, each first aid squad receives $25.00 for each call and the fire departments $50.00 for each piece of apparatus.

Records of State Police assigned to the Turnpike, who are also contributing to the remarkable safety record, indicate that an ambulance arrives on the scene of an accident at any location generally at not more than 15 minutes from the "call time."

There is a standby first aid squad within three minutes from all points of entry to the Turnpike. Where interchanges are far apart, the Authority has provided emergency entrance gates connecting with local roads.

The first aid squads on the Turnpike have an average membership of 24 men with some exceeding 50

members. Within minutes these squads can have two ambulances on the road and specially equipped crash trucks with portable generators and lights. Several squads have attending physicians supplementing highly trained personnel.

Auxiliary Units

In addition to the 36 standby squads, the Authority has engaged an equivalent nucleus of units auxiliary to the standby squads. These auxiliary units serve in the event the regular units are on another call, or when additional units are required.

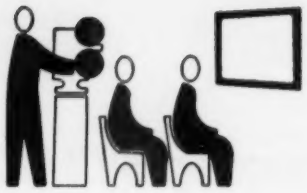
"Our studies indicate that if the Authority undertook to provide a round-the-clock first aid service of its own, it could not begin to provide the equal of the service available to the users of the New Jersey Turnpike," Chairman Morecraft said. He also added, "While we are anxious to provide the best service possible in the event of an accident," he said, "our prime interest is in their prevention."

Plans Made for Ohio Chemical Symposium

A symposium on the packaging and transportation of chemical products sponsored by the Manufacturing Chemists' Association will be held at the Cleveland, Ohio, Engineering and Scientific Center on April 29–30, 1959.

The program being drawn up by MCA's Chemical Packaging Committee will deal particularly with new developments in packaging and transportation of dangerous products. Speakers will include Commissioner Howard G. Freas, chairman of the Interstate Commerce Commission; Admiral A. C. Richmond, commandant of the U. S. Coast Guard; and others prominent in regulatory groups or industry.

Although the symposium is sponsored by a chemical industry group, registration will be open to all interested parties. Details of the program and procedure for registration will be announced later.



Safety on Film

Industrial Rubber

A new 16 mm color and sound movie, "Progress In Industrial Rubber Products," describing the operation of a modern rubber plant has been put out by the Quaker Rubber Division, H. K. Porter Company, Inc. The 25-minute film reveals how raw materials are used to produce quality rubber products through improved production facilities. It describes the process of making such vital products as conveyor belts, wrapped and molded hose, fire hose, escalator hand rails and electrical insulating tapes. Scenes of Quaker's modern laboratory facilities are highlighted showing the various routine and special tests performed on all raw materials and finished products.

Arrangements for showing the film may be made by contacting the advertising department, Quaker Rubber Division, H. K. Porter Company, Inc., Tacony and Comly Streets, Philadelphia 24, Pa.

Health Awareness Films

A series of nine animated color films on the general subject of health awareness is available from United World Films, Inc. The films are specifically designed to enlighten and encourage people to take an active interest in their personal health and in the health of their communities. The emphasis is on the relationship between cause and effect rather than on procedures; and the subject matter provides factual information for use by industrial health departments, local health agencies, and school health and hygiene classes.

The specific subjects are: "The Human Body," "What Is Disease?", "How Disease Travels," "Cleanliness Brings Health," "Infant Care," "Tuberculosis," "Defense Against Invasion" (Vaccination), "Water, Friend or Enemy," and "Winged Scourge" (The mosquito as a transmitter of malaria).

The lengths of the films vary from nine to thirteen minutes and prices range from about $48 to $92. Full details can be obtained from: United World Films, Inc., 1445 Park Ave., New York 29, N. Y.

Pipe Machine Film

Breaking the Price Barrier is the title of a new 16 MM full color, sound film just released by The Oster Mfg. Co., of Wickliffe, Ohio. The film features Oster's pipe threading machine for applications both in the shop and on the job. Anyone having anything to do with threading of pipe or conduit will find this movie both interesting and informative.

The company makes the film available on a free, loan basis to any responsible organization such as trade associations, vocational classes, foreman groups, contractors, architects, engineers and all others interested in modern, portable power equipment for threading pipe, conduit or rods. In addition, this film has been cleared for television use. Running time is 14 minutes.

Although a number of prints are available, it is recommended that reservations be made well in advance of scheduled meetings. Bookings will be made on a "first-come-first-served" basis. For details write to: Oster Mfg. Co., 289th St. & Nickel Plate R. R., Wickliffe, Ohio.

Handicapped Workers Are No Handicap

An overwhelming majority of the more than 1,000 physically handicapped employees of the Du Pont Company have achieved average-or-better levels of job performance, safety, and attendance, according to a company-wide study completed by the Employee Relations Department.

Moreover, it appears that the nature of the handicap does not prevent the employee from doing a good job, as some of the best performers have the most severe handicaps—amputation, blindness, deafness, and paraplegia.

Of Du Pont's 90,000 employees at the close of last year, 1,021 in plants, laboratories, and offices throughout the country were physically handicapped in terms of the severe standard: ". . . a physically handicapped condition which might prevent an employee from handling such jobs as the average non-impaired worker could handle." So rigidly does the company adhere to this definition that many employees who normally would be considered handicapped are not included in the study.

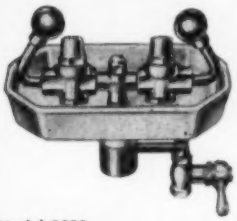
The safety records of this group, as reported by their supervisors, disclose that 39 percent were better than average; 59 percent average, and only two percent were below average. In attendance, 36 percent were better than average, half were average, and 14 percent were below average. In job performance, 27 percent were above average, 60 percent average and only 13 percent below the norm.

Operators comprised the largest segment of the handicapped people with 258; following closely were craftsmen and foremen, with 255. Professional and technical jobs totaled 163; service workers, 145; clerical, 131; supervisory and management, 43; and laborers, 26.

Nine totally blind employees and 12 deaf mutes were included in the group. Amputees numbered 118; cardiovascular diseases accounted for 259 (the largest group); musculoskeletal diseases such as severe arthritis and scoliosis, 193; the neurological group (polio, paraplegia, cerebral palsy, etc.), 131.

Protect Eyes

with HAWS EMERGENCY EYE-WASH FOUNTAINS



Model 8930:
Basic eye-wash model; enameled iron bowl, chrome plated brass heads. HAWS also offers eye and face wash fountains and drench showers.

Chemicals, foreign particles, caustics – all mean DANGER to eyes! Instant relief is vital! HAWS Eye-Wash Fountains flood the eyes with controlled water streams – soothing, relieving until medical aid arrives. Fool-proof operation activates fountain instantly, possibly avoiding permanent injury. HAWS Emergency Facilities are also widely used for routine cleansing of eyes as a precautionary measure. Write today for illustrated literature on HAWS complete line of emergency facilities.

HAWS DRINKING FAUCET CO.
(Since 1909)
1443 FOURTH STREET
BERKELEY 10, CALIFORNIA
(For details, use Key # B-11 on card on page 1)

ANOTHER FACE OF CRIPPLING

Six-year-old Dianne is just as bright-eyed and winsome as any other little girl, but the fact is she was born with a handicap—a condition leading to enlargement of the head. The March of Dimes hopes to do something about Dianne's problem—and the problems of many other children with birth defects, arthritis and polio. *All* need your help.

JOIN THE MARCH OF DIMES
TOWARD GREATER VICTORIES

Severe hearing and vision impairments, short of total affliction, and miscellaneous handicaps accounted for the remainder.

The statistics disclose that workers who were handicapped at the time they were hired perform better on the job and have better attendance and safety records than those whose handicaps developed after going to work for the company. The better showing of the one group probably can be explained by the fact that those who are handicapped at the time of employment usually have an exceptionally strong incentive to prove their ability on the job.

Du Pont is one of 51 companies cooperating on the Delaware Governor's Committee in a move to encourage employment of the physically handicapped. In Delaware and other states the company works closely with the Governors' Committees and the United States Employment Service in the hiring of handicapped people, as do other companies. Those organizations keep track of job possibilities and send applicants to see potential employers. This gets the information centralized for the handicapped so that they do not need to hunt nonexistent jobs. Some applicants apply directly to the company but the centralized setup is considered better for the individuals and most of them use it.

Du Pont does not create jobs specially suited to handicapped people but men and women referred to the company by the Governors' Committees are interviewed just as are other job applicants. The interviewer looks for the same qualities in the handicapped as he does in the nonhandicapped people. With the qualities determined, it is a question of matching the individual's abilities with any jobs that may be open.

Once the new employee is placed, supervision plays an important role—as it does with any other employee—but with the handicapped, the role of the supervisor is doubly important. It can mean the difference between failure and resulting added discouragement, or the development of a good worker, well adjusted on and off the job.

"With the traditional concern of Du Pont Company management

(Continued on page 44)

Learning The Hard Way

CARBON TET STRIKES AGAIN

Two men were cleaning a lathe with carbon tetrachloride in the basement of their home. The room had no ventilation and they worked in the fume-filled atmosphere for about three quarters of an hour. A week later both had to be taken to the hospital and four days later they both died. Once again, carbon tet proves that it is a killer. It should only be used where there is plenty of ventilation; but better still, use a less toxic solvent as a substitute.

ANTIQUE JET PROPULSION

In tearing down an old private garage, workmen found an old acetylene bottle. They took it outside and opened the outlet valve so the contents could escape. About two hours later, the bottle started to move and traveled about 30 feet. On its way it struck a workman and pinned a small boy against a wall. Minor injuries were sustained. Possibly some obstruction in the valve gave way suddenly, causing the container to act like a rocket. It illustrates the care and attention that must be given in handling or storing any type of compressed gas container.

RUNAWAY TRUCK

The driver of a large truck-trailer left his vehicle double-parked on a slight incline while he transacted some business in a nearby building. Although the brakes had presumably been set, the truck began to move, gathered momentum, killed one person, and plowed into a building. Aside from the legal possibilities of double-parking, the following safety rules were ignored: Be sure the parking brake is set securely; Remove keys if vehicle is to be left unattended; On an incline, wheels should be snubbed against the curb; Place chock blocks under wheels.

RETARDED CHILDREN

CAN BE HELPED

THE FIRE FRONT

New Fire Test Area

A towering pillar of smoke rises from fire on a new Test Station built by Ansul Chemical Company near Marinette, Wisconsin. The manufacturer of dry chemical fire extinguishing equipment initiated the field with tests of an air crash fire truck with a dry chemical capacity of 4,000 pounds.

A total of 800 gallons of gasoline was spilled on a clay area about 100 feet in diameter for this particular fire. Volume of gasoline used for a single fire during the tests ran as high as 1,000 gallons. Preparation of the Test Station began last spring when bulldozers cleared brush and leveled the area. The field covers about 12 acres. Its layout resembles a giant wedge which is about one-third of a full circle. The two straight sides of the wedge are 450 feet long.

A total of 6,000 yards of gravel was laid down over the area. The clay circle where the first test fires were run is at the midpoint of the wedge. The new Test Station is ideal for testing large capacity extinguishing equipment because of its size and the fact that it is far removed from residential areas.

Fire Retardant Materials In Schools

The disastrous Chicago school fire points up the need for more extensive use of fire retardant materials in buildings of combustible construction, notably wood. Development engineers of The Flintkote Company, suggest that new materials which have become available will curb hazards in structures built in the prefireproofing era.

Practically all newly built schools are fireproof by building code requirement, but thousands of older ones are not, as vividly indicated by the current nationwide inspection furor.

While wood framing is generally obsolete in multi-story or large buildings, areas such as floors and stairways are the most susceptible for economical protection with the new fire resistant materials. These will eliminate danger sources to an appreciable extent short of demolishing to re-frame the structure, they point out.

Incombustible coatings used over wood will delay flame spread and make many of the older schools serve more safely until it is possible to replace them with fireproof construction. The relatively recent development of latex concrete is one example of the newer materials. Latex concrete, which is as incombustible as concrete, is a mixture of cement, sand or pebbles with a resin latex instead of water for the liquid component. The latex offers excellent adhesion, non-brittleness and non-cracking characteristics as compared with ordinary concrete. It can be spread as thin as ¼ inch over wood corridors, steps and floors, providing great resistance to wear and water as well as to fire. It is economical and easy to apply with a trowel.

A second and similar mixture of cement, sand or pebbles and a special asphalt-base clay-emulsion binder has been a standard floor resurfacer to meet ravages of traffic in factories for many years. It is called asphalt mastic and will not support combustion even in the hottest fire. This type served as a major retardant to fire spread particularly in London during World War II. Combustible wood areas were surfaced to resist incendiary bombs. This material is effective in covering wood as an underlayment for decorative asphalt tile and other floor coverings of a fire resistant nature.

The third and latest innovation in fire resistant surfacing for trowel finish over wood is an epoxy resin mixture with mineral fillers which hardens with the addition of a catalyst or setting agent. This material is unusually tough and crack resistant even when applied in coatings as thin as ⅛ inch.

November Losses Drop

Estimated fire losses in the United States during November amounted to $71,539,000, the National Board of Fire Underwriters has reported. This loss represents a decrease of 5.0 percent from losses of $75,321,000 reported for November, 1957, and a decrease of 2.5 percent from losses of $73,393,000 for last October (1958).

Losses for the first 11 months of 1958 now total $955,743,000, an increase of 2.6 percent over the first 11 months of 1957, when they amounted to $931,671,000. These estimated losses include an allowance for uninsured and unreported losses.

Fire Hazards of Garages

With the ever increasing number of motor vehicles for transportation, commercial and pleasure purposes, municipal traffic and parking problems become daily more complex and difficult to resolve. Commensurate with this growth in motor vehicles, many new automotive service stations and garages of all types, including large area open air parking and underground parking garages, are being built each year in many cities throughout the country. In many newly constructed buildings, the grade floors and the basements are designed and utilized specifically for the parking of motor vehicles.

In most garage occupancies there are features or operations of a hazardous nature that require proper safeguards from the standpoint of safety to life and property as from fire, warns a recent bulletin of the National Board of Fire Underwriters.

Some of the hazardous operations are: refueling of motor vehicles, which involves the dispensing of gasoline; storage, handling and use of flammable liquids and substances in connection with spray painting of car bodies and fenders and automobile undercoating; use of portable infra-red drying apparatus; and welding and cutting.

Dispensing devices used for refueling motor vehicles should be located well away from repair and storage areas. Installation of equipment used for the dispensing of flammable liquids should be in compliance with the Standards for the Storage, Handling and Use of Flammable Liquids, NBFU No. 30.

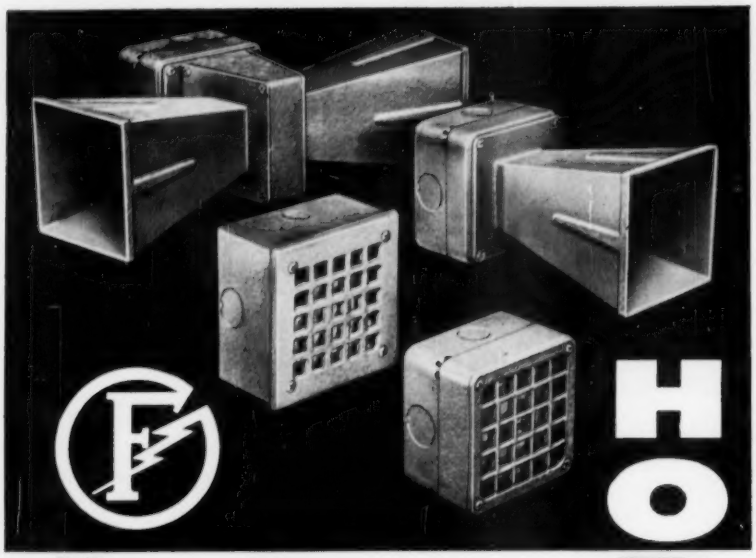
Spray painting operations using flammable liquids and the use of infra-red drying apparatus should conform to the Standards for Spray Finishing, NBFU No. 33.

Various rubber, tar and asphalt products are used as coatings for undercarriages and chassis of motor vehicles, as vibration dampeners, noise deadeners and for protection of metal against corrosion and rust. These protective coatings have also been applied at time of manufacture to various other parts (sections and panels) to eliminate "tinny" noise, squeaks and rattling.

These materials are of a gummy and plastic consistency and are composed of rubber or asphalt with asbestos and other inert fillers. They are generally of the flammable-solvent type or the water-emulsion type; the latter type may be considered nonflammable. These materials find wide outlets in motor vehicle repair shops, service stations, and dealers' garages.

The flammable solvent types vary in respect to their fire hazard and flash points. A number of such products are listed by Underwriters' Laboratories, Inc. in its Gas and Oil Equipment List under the heading of "Coatings—Protective"; flash points of these coatings range from about 58° F to 120° F. Wherever undercoating materials are employed, which have a flash point of 100° F, or less, it is recommended that the undercoating spray operations be conducted in compliance with the Standards for

(Continued on page 46)



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guide your employees in home fire safety

Here is background information on fire extinguishing equipment in the home. Use it in safety meetings, on bulletin boards, or in house organs to guide employees in fire safety.

Fire fighting is a hazardous occupation and as much as possible should be turned over to those who are trained in fire extinguishment and have the proper equipment for the work, warns a recent bulletin of the National Board of Fire Underwriters.

Therefore the first consideration in fire protection for the home in a community having a fire department is:

1. To learn definitely how to call the fire department,

2. To teach this to every member of the household,

3. To impress upon every member the importance of calling the fire department promptly.

The next consideration is having suitable fire extinguishing equipment in the home, because a fire may occur in any home at any time. The best type for the average home is equipment that will not need special skill to use effectively and will not require any special maintenance attention.

Most homes have running water in the basement, kitchen and bathroom, and many have one or more outside hose faucets for garden hose. A pail located in the basement, a saucepan or the dishpan in the kitchen, or a basin or pail in the bathroom makes a very effective device with which small fires can be extinguished. Garden hose from the faucet in the yard can be used on grass fires or where the roof is ignited by a spark from the chimney. Garden hose is also effective on fires inside buildings. Special faucets can be provided if needed and adapters can be kept at hand to permit attachment of the hose to any existing faucet in the home.

Garden hose should be kept in a conveniently accessible location. Keeping hose reserved for fire use only is of questionable advantage because it will then need special maintenance attention to keep it in usable condition at all times.

A large size insecticide sprayer discharging water may make an effective fire extinguishing device.

One or more automatic sprinkler heads installed at the ceiling in the basement provide excellent fire protection. They may be connected to house water piping, preferably through ¾-inch or larger pipe.

Some fires in the home cannot be fought effectively with water. These are principally fires involving grease and they generally occur in the kitchen. The throwing of water into a frying pan or other utensil containing fat or grease which has become ignited will often result in a large burst of flame and the spattering of the grease over the persons in the room. The first consideration in connection with a fire of this kind is to shut off the gas or oil flow, or turn off the electricity, or remove the vessel from the stove if it is a coal or wood stove. A quick method of extinguishing burning grease in a pot or pan is to place a cover over it, which can be done by using a long handled fork catching it in the knob on the cover. An effective extinguishing agent for grease fires, particularly the kind that occur in the broiler of a stove, is ordinary baking soda. A handful of this thrown across the blaze in such a way as to form a cloud of soda dust will quickly ex-

tinguish the fire. Never use flour or any similar material, as this, instead of putting the fire out, may result in an explosion.

Where a fire is in a closet, closing the door will sometimes smother it out. In every case, close any door which will tend to confine the fire.

Where there is no fire department to be called or the fire department must come from a long distance, and in a house where there is little or no running water, it is especially important that suitable fire extinguishing equipment be provided. In such cases it is often practicable to keep a barrel or buckets filled with water, protecting against freezing, if necessary, by adding a suitable chemical, such as calcium chloride to the water.

Hand Extinguishers

More effective use of water is obtained from a hand pump tank than from pails or buckets. A hand pump tank consists of a container holding 1½ to 5 gallons of water with a short length of hose and a hand-operated pump by means of which water can be discharged as a small hose stream. It is preferable to keep them filled with water. They need to be operated occasionally to keep them in working condition.

Various other types of fire extinguishers are available. It is recommended that only extinguishers bearing the label of non-commercial testing laboratories (U.L. or F.M.) be purchased. **As no one extinguisher is good on all classes of fire, it is important that the person attempting to use any extinguisher know its limitations and the proper method of application.** If fire extinguishers are to be in usable condition when needed they must be given regular maintenance attention as indicated in the manufacturers' instructions.

Information on the various types of fire extinguishers may be obtained from insurance agents or the local fire chief.

There are several features of home fire fighting which must be remembered.

• Never attempt to fight a fire in a cellar or basement which has become filled with smoke. The fumes may be poisonous, and the lack of air may quickly overcome a person.

• Don't try to enter a room where much fire is in evidence.

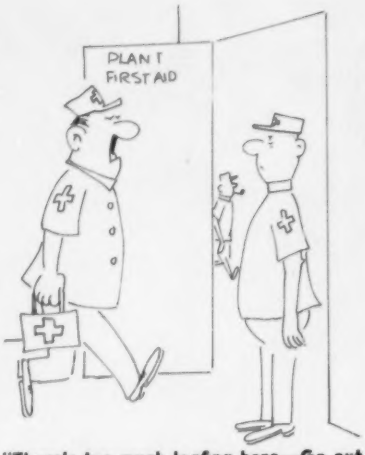
• See that everyone is out of danger. A human life is worth more than any building or contents.

• Call the fire department promptly.

• Insurance will pay for losses; therefore keep your property and goods insured to their full value.

• Be careful of hazards.

• Don't ask the women and children to endanger their lives with fire fighting. Dresses of cotton and of most light flimsy material ignite easily.



"There's too much loafing here—Go out and trip somebody!"

Picture by courtesy of National Board of Fire Underwriters.

Ansul Fireman Hits the Road

Frank Hruska, director of Ansul Chemical Company's Fire School, took to the road this winter to conduct two-day field schools in the South and Pacific Coast areas. He'll continue his cross country fire-fighting instruction until April, 1959. Fire School sessions at Ansul's headquarters in Marinette, Wisconsin, will begin again in April.

Hruska estimates he's ignited and extinguished more than 20,000 fires in his eight years as Fire School director. His training schools this winter will be patterned closely after the three-day summer fire-fighting sessions. He is instructing fire brigade members and their supervisors in the extinguishment of actual fires which simulate common industrial hazards.

Trainees extinguish a variety of gasoline and crude oil fires as well as fires burning in natural gas, propane and butane. Unusual fires, of special interest to the group receiving training, are also ignited and extinguished. Practical experience is supplemented with fire training films and classroom work on the operation, recharging maintenance of extinguishers.

More than 600 people are expected to attend the winter fire schools—men from aircraft plants, oil refineries, public utilities and other industries. The schools are conducted at each customer company's fire training grounds.

Handicapped Workers

(from page 40)

for the individual," says Emile F. du Pont, director of the Employee Relations Department, "we feel that our supervisory personnel throughout the company are helping to effect on-the-job rehabilitation for the handicapped employee that might well be above the average experience in industry. It is already evident that skillful supervisory performance can result in the upgrading of job potential for handicapped workers who might otherwise never enjoy opportunities for advancement."

It is of possible interest that only 54, or about 5.3 percent of the physically handicapped now employed, returned from military service with handicaps, although it was the employment of returning veterans immediately after the close of World War II that first gave rise to a pronounced interest in Du Pont in physically handicapped persons.

Although no figures are as yet available, it is believed that job turnover for the group is considerably lower than that for the non-handicapped, probably because job security is so important to the handicapped and because of favorable conditions associated with their employment.

According to Mr. du Pont, the study just completed indicates that "physically handicapped persons are capable of maintaining creditable performance. We intend to continue employing physically handicapped individuals where the handicap will not affect safe and effective job performance."

Fig. 1—Chemical plant repair supervisor descends four-story escape ladder protected by incombustible asbestos shield.

THREE TIPS ON FIREPROOFING

FIRE SHIELD IN CHEMICAL PLANT

A new, completely incombustible insulation board is being used as a safety shield between an escape ladder and a four-story ammonia processing structure in one of the largest chemical plants in the Southwestern United States. The board is composed entirely of long-fibered South African asbestos bonded under high pressure steam with a special top grade silica.

The shield is a precautionary measure to protect personnel descending to the ground, in the event of fire or an explosion. See Figure 1.

According to supervisory personnel at the chemical processing plant, the new asbestos material was chosen because of its ease of handling, work-ability and singular ability to stand up in the face of moisture, fumes and steady sunshine. The shield was easily applied to the face of the existing structure with ordinary nuts and bolts.

The new board is resistant to fire, moisture, steam, chemicals and corrosion and withstands temperatures as high as 2300° F. It has received a non-combustible rating from Underwriters' Laboratories, Inc.

FIRE INSULATION OF "I" BEAMS

One of the largest oil refineries in the Southwest is using the same new insulation board to box steel "I" beams for fire protection. The beams are part of a two story superstructure for a gas turbine at the refinery. See Figure 2.

Cutting, fitting and fastening of the incombustible board around the steel beams was done on the job, without the use of special skills or tools.

In addition to its protective features and U.L. rating, the board is said to be as workable as wood, can be sawed, bevelled, nailed or fastened with screws with ordinary tools and without advance preparation.

FIRE PROTECTION FOR TANKS

Problem: How to provide needed fire protection for 21 tanks of highly volatile liquids at tank farm of Texas Butadiene Company, Channelview, Texas.

Solution: Fireproof by spraying a special vermiculite-cement ma-

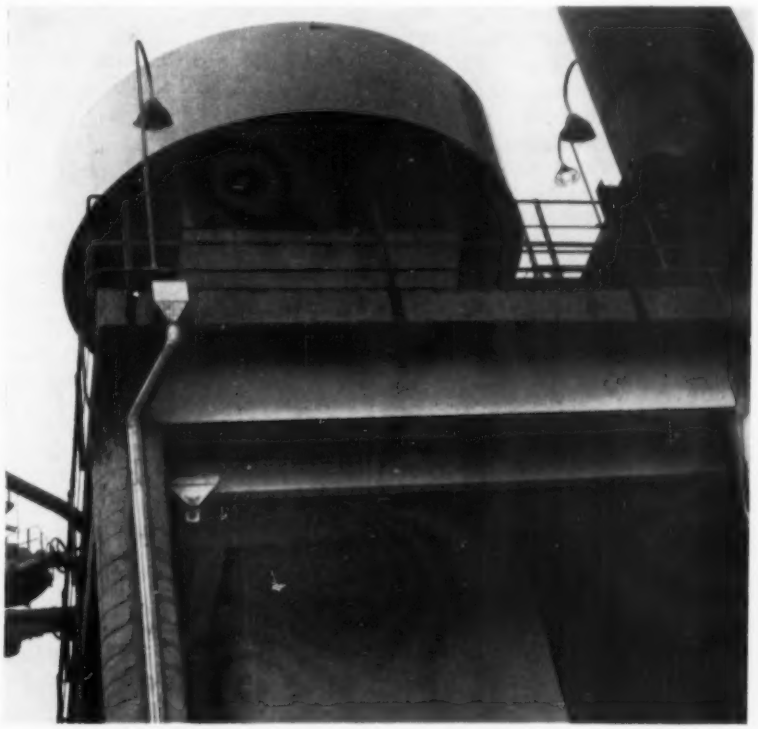


Fig. 2—Steel "I" beams framing platform of a two-story gas turbine superstructure in petroleum refinery are boxed with insulation board of workable material.

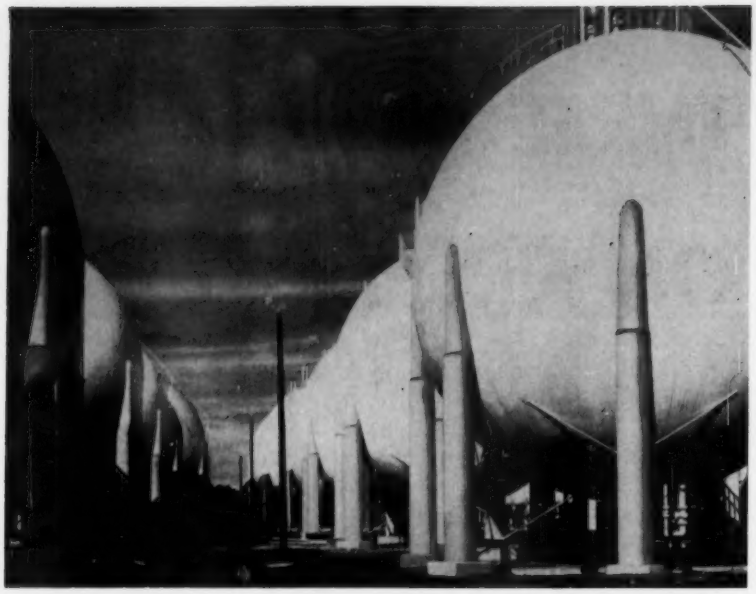


Fig. 3—Supporting legs of 21 tanks at Texas Butadiene Co., Channelview, Texas, were recently made fire-resistant with a special vermiculite-cement treatment.

terial to tank legs. See Figure 3.

Here's how the fireproofing concern did the job. Continuous bar chairs or slab spaces were placed on ½-inch points around the circular legs. Chairs were ¾-inch high with a No. 5 top wire and No. 7 leg wire. A 1½-inch 17 gauge galvanized key mesh was then wrapped around the legs. The chairs served to space the mesh approximately mid-point of the proposed fireproofing.

Next, a 2-inch thickness of fireproofing consisting of vermiculite aggregate and cement in a 4:1 mix, was applied. This was followed by a white protective coating to match the color of the tanks.

Result: A pleasing appearance, fulfilling a vital requirement of fire protection in a critical area.

Pictures: Preceding page—North American Asbestos Co.; this page—Zonolite Co.

Fire Hazards of Garages

(from page 42)

Spray Finishing, NBFU No. 33. Where protective coatings having a flash point in excess of 100° F are used, spray operations may be conducted with reasonable safety if adequate ventilation is provided and no open flame or other sources of ignition are present during such operations.

Repair pits, so arranged that natural ventilation is not adequate, should be provided with an individual ventilating system. Pits should have adequate exits to prevent trapping of personnel in the event of fire. Hoists or elevated trestles are preferable in performing repair services.

Use of Solvents

Cleaning of parts should preferably be done with nonflammable solvents. However, a flammable solvent with a flash point above 100° F may be used with reasonable safety for washing parts or removing grease or dirt provided adequate ventilation is supplied and no sources of ignition are present in the cleaning area. Chassis cleaning should not be done with flammable liquids. Steam cleaning devices, if used, should be listed by a nationally recognized testing laboratory and should conform to the Standards for Oil Burning Equipment, NBFU No. 31, for oil consuming units and to either NBFU No. 54, Gas Piping and Gas Appliances in Buildings, or NBFU No. 58, Liquefied Petroleum Gases, for gas burning appliances.

Proper safeguards should be taken whenever any welding or cutting operations are performed. Such operations should conform to the Standards for Gas Systems for Welding and Cutting, NBFU No. 51.

Because of the hazardous operations usually present in repair garages, it is important that large repair garages be protected by automatic sprinklers. It is desirable that sprinklers be installed in large parking garages also. Automatic sprinklers have an excellent record in controlling fires in garages. Even though burning gasoline is not extinguished by sprinkler discharge and gasoline floating on water may spread the fire to some extent, the water keeps the area cool, limiting the spread of fire and rendering the flames relatively harmless.

Statistics compiled by the National Fire Protection Association, covering the years 1925 to 1950, inclusive, showed that of 1021 fires reported in sprinklered garages, 71 percent were extinguished by the sprinklers and in 27 percent the sprinklers held the fire in check—a total satisfactory sprinkler performance of 98 percent.

Descriptions of fires involving garages are found in a publication of the National Fire Protection Association entitled "Occupancy Fire Record—Garages," (FR-54-1), obtainable from the Association at 60 Batterymarch Street, Boston 10, Massachusetts, at 50 cents per copy.

Fire Alarm, Time & Paging System

In an industrial operation of the size and scope of the General Motors' plants in Oshawa, Ontario, highly efficient plant protection systems are a prime requisite. Not only does sound management practice dictate such a policy, but fire insurance requirements as well, make such systems more than practical.

General Motors of Canada therefore established as their first project a system for fire alarm transmission. In addition, they required an automatic time signalling system to announce shift changes, rest periods, lunch periods, etc., to employees. Generally, these systems employ separate wiring and separate noise-producing devices, but General Motors selected a single, elec-

tronic system which provides both fire alarm and time signals, and with the addition of a microphone, gives them facilities for voice paging. Signals and alarms are produced electronically and the same wiring, amplifiers and reproducers are used for all three transmissions.

Operation of the System

Plant Protection devices and equipment are located and coordinated at the Plant Protection Building, adjacent to both plants at the Oshawa facilities. The building contains ticker tape-type recording devices which identify the location of an alarm, and smoke control recorders which indicate the density of smoke at that point.

Personnel in the Plant Protection Building supervise fire protection equipment throughout the plant 24 hours a day. This is termed a "Class A Proprietary Fire Alarm System" and insurance rates are proportionately favorable.

A Control Rack and Panel, located in the Plant Building, "drives" the entire Control System. If a power failure occurs, the rack is automatically connected to an auxiliary source of power.

Speaker Location

In the Final Assembly plant, sound reproducers are mounted some 30 feet in the air, above the conveyor chain level, in the lines following the pattern of the assembly layout. There are 10 to 15 reproducers in each line, determined by the noise level below. Each line of reproducers is "headed" by an amplifier, also mounted above the floor level in accordance with local fire regulations. This system is so staggered that if an amplifier fails, the fire alarm tone can still be heard from reproducers in neighboring lines.

Fire alarm break-boxes are located throughout the plant. When the glass on these is broken and the handle pulled, a coded alarm tone is produced by the tone generator at the rack to all reproducers in the system. Alarms are also permanently registered on the recorders at the Plant Protection office. These are simultaneous actions, set off by the break-box alarm.

Fire alarms take automatic priority over all other forms of transmission at the rack. (Although not part of this system, provision can be made for Air Raid Alarm.)

Automatic time signals are also transmitted from the rack. The signal generator works off the contacts of GM's Master time clock.

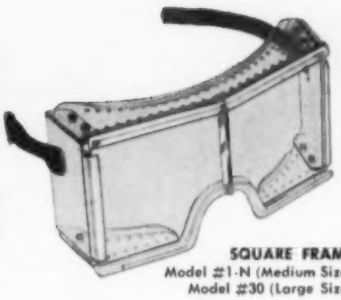
Paging System

Although not part of General Motors' original requirements for these plants, voice paging is a widely used and effective application of this system. When the plant first opened, daily page calls numbered 7 or 8. Now they average in excess of 2000 a day. By the time construction was started on the new building, General Motors themselves were so convinced of the value of voice paging that they requested a microphone be installed in the guard-house. Paging was used to speed up the location of division personnel during the period required to set up production machinery.

Microphones are located at the Reception Room at the main entrance to the Final Assembly Building and at the Plant Protection Building. These two locations have 2-channel and all-call switches which enable them to call the Final Assembly Building or the Body Plant separately or both together. In addition there are microphones in the Plant Production Offices, one situated centrally in the Final Assembly Building and the other situated centrally in the Body Plant which can page their respective buildings.

In addition to locating personnel, every page call serves, in effect, as an automatic check on amplification for the fire alarm system. Every time signal serves, in addition, as a check on the tone generator's operation. Heretofore, fire alarm systems could only be tested by announcing a practice alarm and then actually turning in an alarm.

ROUND FRAME
Model #7 (Medium Size)
Model #27 (Large Size)



SQUARE FRAME
Model #1-N (Medium Size)
Model #30 (Large Size)

Rigid Frame COVER GOGGLES

Unimpeded Side Vision. Crystal clear frames permit unimpeded vision from both sides as well as from under and over the eyes.

With their shatter-resistant, optically-correct IMPAX Lenses, these goggles permit excellent vision in all directions and provide maximum heavy impact protection from all angles.

Interchangeable Lenses reduce costs and cut down goggle inventory needs.

All-Molded Construction provides extra strength . . . resists breakage at all points.

Lock Bar holds lens firmly. Has integral annealed end permitting easy removal for lens replacement.

Black or Green Frames are also available.

For details, see your authorized EYE SAVERS supplier or write direct.

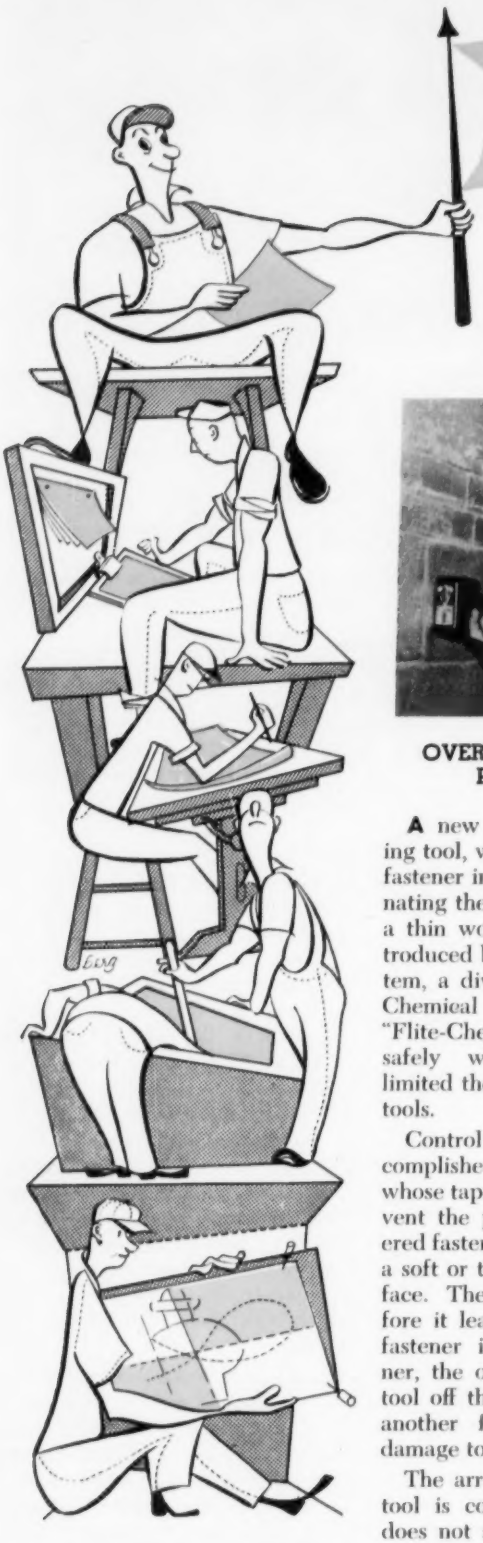
Quality Eye Protective Equipment *Made by the Leaders in Plastics*

WATCHEMOKET OPTICAL CO., INC.

232 West Exchange St. PROVIDENCE 3, R. I. *In Canada: Levitt-Safety Limited, Toronto 10, Montreal 26, Winnipeg.*

(For details, use Key # B-12 on card on page 1)

KEEPING UP WITH



MACHINE GUARD SERIES
other articles Dec. & Jan.

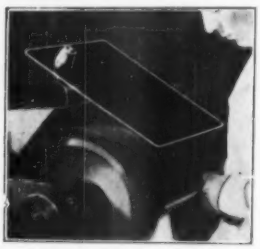
OVERDRIVE GUARD FOR POWDER TOOL

A new powder-actuated fastening tool, which stops an overdriven fastener in its tracks, thereby eliminating the danger of firing through a thin work surface, has been introduced by Ramset Fastening System, a division of Olin Mathieson Chemical Corporation. Called "Flite-Check," the tool can be used safely where restrictions have limited the use of powder-actuated tools.

Control of the fastener is accomplished by a new assembly whose tapered interceptor jaws prevent the passage of an over-powered fastener or one that encounters a soft or thin spot in the work surface. The fastener is stopped before it leaves the tool. When the fastener is stopped in this manner, the operator simply pulls the tool off the work and is ready for another fastening. There is no damage to the tool.

The arresting device in the new tool is completely automatic and does not slow down its operation. It is simple to use and is designed for threaded studs. The new tool is expected to find its greatest use in industrial plants for such jobs as fastening electrical fixtures, partition plates, ducts, plumbing lines, machinery mounts, and similar applications. Special fixtures and locating devices can be designed for Flite-Check upon request. The new tool uses ¼-inch fasteners with special plastic tips.

For details, use **Key # MG-1** on inquiry card on page 1.



MAGNETIZED EYE SHIELD

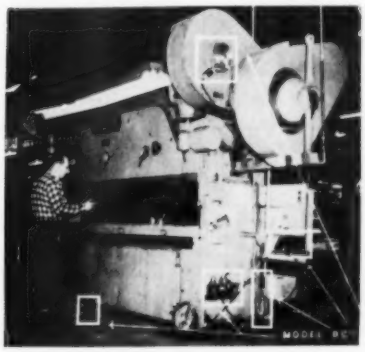
Standard Portable Cord Company, Inc. announces its patented "Magic Eye Shield," an inexpensive device to protect the eyes, face and neck. The unit is constructed with adjustable die-cast zinc clamps attached to a powerful magnet, the Neoprene covered "Alnico V Magnet." An aluminum swivel holds the ⅛" CR-39 shield, allowing universal positioning. Special brackets are available for permanent attachment. The shield can be easily cleaned with soap, water and wax. Replacement shields are in stock for immediate shipment. The powerful permanent magnet holds the "Magic Eye Shield" where you want it on grinders, planers, lathes, presses, shapers, millers, saws and boring mills.

For details, use **Key # MG-2** on inquiry card on page 1.

MACHINE GUARD DEVELOPMENTS

AUTOMATIC PRESS BRAKE

"Joggit," the new automatic brake control, mounted on a press brake will automatically eliminate whipping and assure uniform bends even with an unskilled operator, claims the manufacturer, the General Automation Corp. Seven features of the new control are—1. Automatic stopping of the ram above the work by a preset dial; 2. Automatic and uniform ram movement through the work at a pre-set rate; 3. Automatic return on the upstroke; 4. Automatic stopping of the ram at top dead center; 5. Automatic hesitation at a predetermined point of the downstroke, then follow through; 6. Operation by tiptoe electric foot pedal placed wherever needed; 7. The flip of a switch combines or selects controls to suit many types of operations.



"Joggit" eliminates operator fatigue caused by the usual mechanical foot lever brake operation. The automatic equipment once set for a bend eliminates operator guesswork on production runs. Custom work operators can, in addition, work to a scribed line with ease and complete safety.

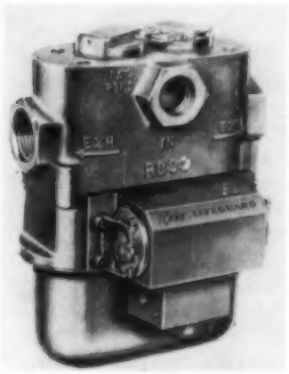
For details, use **Key # MG-3** on inquiry card on page 1.

NEW VALVE IMPROVES PRESS SAFETY

A new "C" version of the Ross "Lifeguard" valve has been made available by Ross Operating Valve Co. Designed to provide safety for operators of pneumatic clutch or clutch-brake controlled power presses, the unit senses any potential malfunction within itself and locks out to prevent unsafe press operation.

The "C" version "Lifeguard" is a precision made, field proven three-way valve which may be re-cocked pneumatically or manually, allowing maximum flexibility in location of the valve. It consists of two three-way valve units connected pneumatically in parallel, each having its own pilot valve operator and solenoid actuator. The attached "lock-out" unit supplies inlet air to the pilot valve operators.

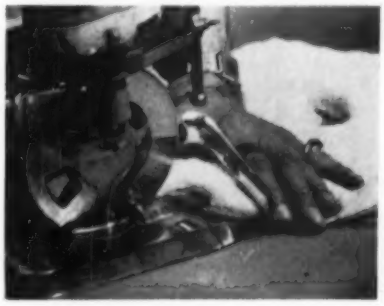
When the valve senses a potentially unsafe condition, the "lock-out" unit makes the valve inoperative, halting the press at the completion of the cycle. Resetting or re-cocking may be accomplished manually if the valve is located within reach of the operator. When it is necessary to locate the valve remotely from the operator, the valve may be re-cocked by providing air pressure at the re-cock port from a small, conveniently located valve. Repeated lockouts indicate that some type of maintenance is necessary before the press can be operated with complete safety.



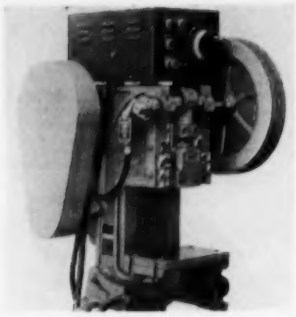
For details, use **Key # MG-4** on inquiry card on page 1.

CIRCULAR CUTTER FINGER GUARD

A new aluminum finger guard to protect cutter's hands when a round knife machine is used has been announced by Julius Bril, Inc. The new unit is adjustable to either hand and to any finger size. The Bril "Fingerguard" is made of heavy aluminum with a steel spring, self-adjusting ring. To protect operators from the revolving blade of a cutting machine, the unit can be adjusted simply by loosening a screw and sliding the guard up or down until the aluminum shield completely covers the finger. The guard has been designed especially for the textile industry, but should find wide application wherever hazardous cutting operations are involved. Unit carries the recommendation of the Chamber of Commerce of the Apparel Industry, Inc.



For details, use **Key # MG-5** on inquiry card on page 1.



8-TON PUNCH PRESS FOR SAFE DIE WORK

Kenco Manufacturing Company announces a new 8-ton "Electro-Safe" punch press described by the Division of Industrial Safety, State of California, as "completely safe in the die area." Using the press for single-trip operation, the operator must depress two widely separated hand controls. Hence operator's hands cannot possibly be in the danger area during the punching period. Flywheel-in-motion and clutching mechanism hazards are eliminated by the use of a high-starting torque motor which delivers power directly to the crankshaft. In single-trip work, the motor goes dead after every cycle, so that dangerous double tripping cannot occur. When power is disconnected, or if it fails, a heavy-duty brake is applied automatically. In addition, the press can be stopped instantly at any point in the stroke cycle by a "Stop" button. Any press failure, either mechanical or electrical, must fail safe. The press can be locked in any desired setting—continuous, single, inch, or foot control—by authorized personnel. To protect the die, a safety stop switch in the control panel enables any type of mechanical or electrical detectors to stop the ram immediately if imperfect feeding or stamping is detected.

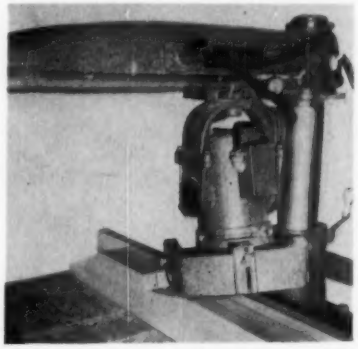
For details, use **Key # MG-6** on inquiry card on page 1.

BOOM CRANE SAFETY GUARDS

A safety device which protects crane operators and ground personnel from the hazards resulting from accidental contact with high voltage power lines, has been introduced by the Saf-T-Boom Corp. Leading authorities, according to the manufacturers, have stated that the guard will withstand up to 36,000 volts for five minutes without current leakage. The unit has also withstood a 5,990 pound drop test, the makers state.

The "Saf-T-Boom" guard is light in weight, easily adaptable, does not obstruct vision nor affect operation of the crane. The complete unit consists of a cage of ¾ inch and 1 inch steel tubing mounted on top of the crane's boom. Weighing 250 pounds, it is furnished with four G. E. 15KV insulators. When the guard comes into contact with a live power line, the insulated frame redirects the current back into the line rather than dissipating it along the crane boom. Two models are available, one for cranes of 20-tons or larger and one for cranes under 20-tons. Models can be modified to fit almost any crane.

For details, use **Key # MG-7** on inquiry card on page 1.



SAFETY GUARD FOR RADIAL ARM SAWS

Following an established policy of designing and manufacturing more efficient and safer accessories for radial-arm equipment, AMF DeWalt has introduced a new safety guard designed to fit their industrial woodworking machines. The new safety guard was developed for use in a variety of shaping, jointing, and rafter notching applications, which are formed on the radial-arm machine by simply placing the motor, which holds the cutting tool, in vertical, or beveling positions. It will supplement the function of the standard safety guard which is employed in more conventional cut-off operations, when the motor is positioned horizontally. Made of aluminum, the new guard is adjustable to any angle, and to the desired clearance of any lumber thickness.

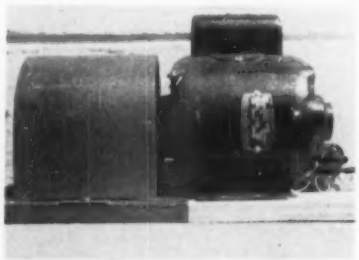
The design of DeWalt machines permits the cutting tool to be suspended above the surface of the material being processed. This feature allows the guard to safely enclose the cutting tool from side approaches and across the top. It is therefore virtually impossible for the operator's hands to come into contact with potentially dangerous areas during normal operation.

For details, use **Key # MG-8** on inquiry card on page 1.

NEW FIRE RESISTANT COUPLING GUARD

Motor coupling guards very often are subject to damage, misplacement and outright loss. To make frequent replacement of the metal coupling guards entails waste and needless labor costs.

Speidel Safety Service announces a new coupling guard so low in cost it will pay to buy them and have them on hand, thus saving the time of mechanics to concentrate on other types of guards. The Speidel coupling guard is of sturdy construction and will support the weight of a man when it is anchored in place. It is made of two thicknesses of hard finish asphalt paper riveted together with a sixteen gauge sheet metal rib which also acts as the feet for bolting to the motor base. The rib of quarter inch round stock will slip into holes in the motor base eliminating all bolting. This makes for easy removal and replacement of the guard and the maintenance men are not so likely to fail to replace it, according to the manufacturer.

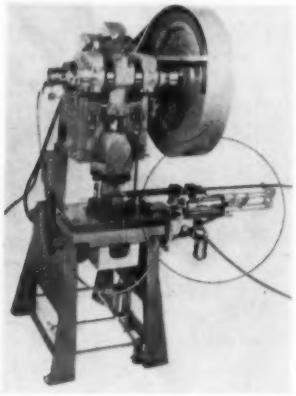


For details, use **Key # MG-9** on inquiry card on page 1.

AIR-OPERATED FEED UNIT

Hand-fed punch press jobs can be converted to safe, faster automatic feeding with the new "Renco-Aire" portable, air-operated stock feed. Incorporating the patented "Micro Valve" control, the unit can be mounted in minutes without links or rods. This low-cost, press feed line is offered by the Industrial Sales Division of Cleveland Pneumatic Industries, Inc. Four standard sizes are available for use with almost any hand-fed punch press, and can easily be shifted from one machine to another as job requirements change. The new punch press feed is entirely air operated. Air consumption is held to a minimum because the power can be regulated for individual job requirements by means of a simple adjustment.

Stock grippers are opened for loading and aligning of stock through the guide by means of the patented "Renco-Aire Micro Valve." Stock is inserted so that both strip and coil stock can be fed efficiently. The stroke length is readily adjusted on the built-in feed control stop. Feed tolerances may be held as closely as plus or minus 0.002 in. With additional controls, the stock grippers can be set to synchronize with progressive die operations.



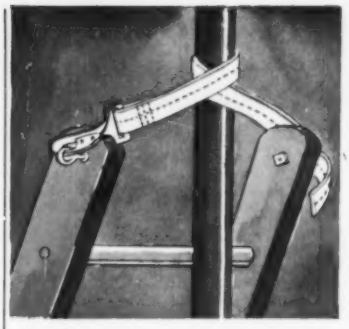
Stock marking is virtually eliminated. Nylon, rubber or other non-metallic gripping jaws can replace the steel jaws for feeding highly polished or pre-finished materials, avoiding any need for costly extra polishing operations.

The new feed unit can be installed on or removed from any punch press within the time usually required for die setting and removal. Putting the press feed into operation requires only one simple connection to the crankshaft of the press, along with attaching the air pressure line to the air filter built into the feed unit.

Standard equipment includes the necessary mounting bracket and fittings to install the feed-synchronizing trip mechanism on the press. No links or rods are required. The bracket requires only a standard die clamp in order to hold the feed unit securely. This mounting feature permits feeding stock from left to right, from right to left or from front to back.

For use on clutch-type presses with mechanical or electrically-controlled clutches, special controls are available to synchronize the action of the feed unit with press operation. The new automatic stock feed comes in four standard models, with 4 in. wide by 13 gauge and 6 in. wide by 13 gauge capacities.

For details, use **Key # MG-10** on inquiry card on page 1.



SAFE-HI LADDER LASH NEW STEP UP IN CLIMBING SAFETY . . .

Can Be Used on Horizontal or Vertical Poles or Pipes!

Knotty ladder ropes have finally come to the proverbial "end of their rope" since the invention of Ladder Lash, latest product of Rose Mfg. Co. The Safe-Hi Ladder Lash, a parachute web strap, solidly anchors ladders for high-climbing workmen, ending the hazards of wobbling, tottering ladders. Ladder Lash will anchor on poles up to 20" in diameter making it ideal for utility pole use as well as any other horizontal or vertical poles or pipes.

No Groping in Mid-Air

Ladder Lash does away with top-rung confusion. In one quick motion the strap is wrapped around any horizontal or vertical pole, the forged steel snap is clipped into the swivel eye bolt and the strap is pulled through the adjustment slide until taut. A simple device, Ladder Lash is easily attached to any ladder. Workmen are sure to like the dependable safety features of the Safe-Hi Ladder Lash.

Safe-Hi Pole Grip Adds Extra Safety Feature

Use Ladder Lash and Pole Grip together for the extra measure of safety. Safe-Hi Pole Grip, already favored by "Higher-up's," is made of 4-ply web strap 26"x1¾" wide with a center section of neoprene tread for super gripping strength on vertical poles.

#632—Pole Grip **#645—Ladder Lash**

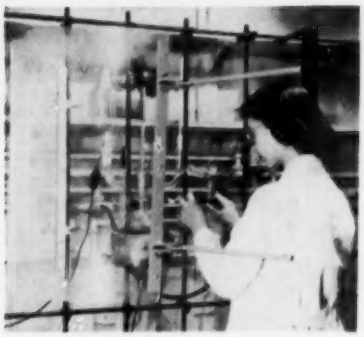
Safe-Hi **ROSE MANUFACTURING COMPANY**
2700 W. Barberry Pl., Denver 4, Colo.

(For details, use Key # B-13 on card on page 1)

SAFETY ROUTER GUARD

A router guard that greatly reduces "break outs" on holding operations, as well as providing safety to the operator on all router operations, has been announced by the Grand Woodworking Company. Cast of high tensile "Mechanite," and machined to allow easy sliding over work surfaces, the new guard also features set screw positioning for depth cutting. The router bit is covered during the complete cycle, and the tendency of the work to "crawl" up the router bit is eliminated, giving the operator maximum protection.

For details, use **Key # MG-11** on inquiry card on page 1.



FULL VIEW LABORATORY SAFETY SHIELD

A new type of laboratory safety shield, developed by the Rohm & Haas Company, is a half cylinder of transparent Plexiglas heat formed from a ¼ inch thick sheet of the acrylic plastic. It has an aluminum frame with hinged rods which fit the usual types of laboratory clamps. The shield gives 180° wide angle visibility of laboratory apparatus and reaction activity and affords protection for the technician against violent reactions, flying glass, and splashes from hot or corrosive liquids. Because the shield is mounted directly on the apparatus rack, it has stability without a heavy metal base. The hinged rods permit the shield to be mounted at any height and to be swung out of the way for apparatus adjustments. The shield has been found especially useful in temperature sensitive processes where it reduces air currents around the columns. A full enclosure around apparatus can be made by mounting two of the units back to back; while tall equipment can be shielded by mounting one unit above another. A further function of these shields is to prevent breakage of costly apparatus by maintenance or other workers. The shields are not intended for use with high pressure apparatus or with high explosives. The "Lab-Guard" is manufactured by Instruments for Industry & Research.

For details, use **Key # MG-12** on inquiry card on page 1.

MULTIPLE-TOOTH CUTTER GUARD

A safety device for protecting multiple-tooth cutters, the operators, and the machines, has been designed and manufactured by Royal Design & Manufacturing, Inc. Called, "Cy-Co-Trol Cutter Guards," each is designed as a permanent accessory for a cutter, and is shipped ready for immediate use. These new guards eliminate the need for costly applications of hot-dip plastic, now commonly applied to cutters before storage. Stripping the plastic before the cutter can be used is also eliminated.

The cutter guards protect the hands of the operator from the sharp edge of the cutter teeth while assembling or disassembling the cutter at the machine spindle, and while handling the cutter in the cutter grind department. The guards also protect the cutter blades in transportation. The guards protect the finished parts of machine from contact with the cutter blades during machine setup.

The cutter guard is made of spring steel and is simple to operate. The cutter is held by a spring pressure band, to which loops are attached for easy assembly and disassembly. These loops are used for locking the guard, and to facilitate lifting the cutter to the machine. A quick-action bolt fastens through the loops of the guard, locking the guard to the cutter. The unit is completely coated with a plastisol material to facilitate handling and to protect the teeth of the cutter. The cutter diameter, or tool numbers, are permanently engraved in the plastisol material. Guards are available for any size cutter, from 4″ to 20″ in diameter.

For details, use **Key # MG-13** on inquiry card on page 1.

SAFETY GUARD FOR POWER SAWS

Three years of experimentation in schools, government agencies, military installations, and industrial woodworking shops in addition to a 12 month test in key industries has resulted in the new "Brett-Guard foolproof power see-thru saw guard." It is designed to give protection in the operation of any conventional table saw with blades of six to sixteen inches diameter. A transparent shield of shatter-resistant Plexiglas covers the saw allowing full vision and accuracy in a wide variety of operations. The guard is set into any of three operating positions in extension plates attached to the table top by a flick of the knob. It is capable of providing horizontal and vertical pressure and can be used as an overriding fence for angular work. The guard prevents physical contact with the blade and resists displacement while in use.

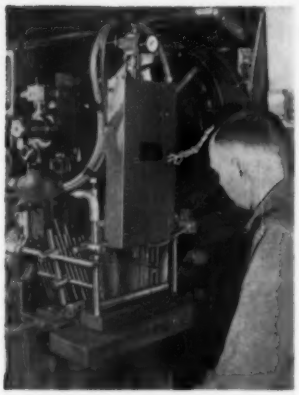
A special feature recently inaugurated is the non-fouling spring-loaded anti-kickback device built into the plexiglas shield which increases operator-protection and further protects against all possible injury to the operator. It is designed to dig into the stock in case of a "force back" and prevent harm to the operator. The Brett-Guard Corp. has received official approval of the New York State Department of Labor.

For details, use **Key # MG-14** on inquiry card on page 1.

NEW GATE AND ENCLOSURE GUARD

Searjeant Metal Products, Inc. has announced the production of a new gate and enclosure guard. Called the "Universal Gate and Enclosure Guard," the unit is said to help prevent accidents and speed up production. Only one guard on each press protects operators during blanking, secondary or hand feed and automatic operation work.

The guard and its electro-pneumatic circuit can be controlled by a switch which can be set for the various types of operations to be performed. For instance, when hand feeding is being done the gate is actuated for each stroke of the press. Thus, the operator is afforded an unobstructed area in which to feed the press while the gate works up and down with each cycle. For strip feeding, the gate is held down all the time. For automatic opera-



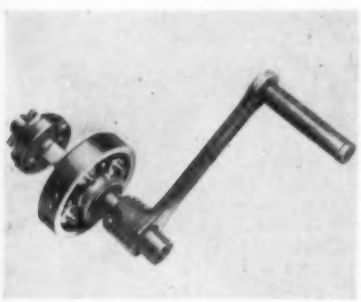
tion, a second switch is thrown to cause the gate to stay down and also to keep the press in continuous motion until stopped.

New features include: guard swings aside for die changes, electric interlock controls, an air line which feeds a 4-way solenoid valve, regulator and gauge for air line pressure, neoprene bumper for striker board, no relays or moving parts in the control panel box and a wired electric foot switch for instantaneous electrical response, etc.

For details, use **Key # MG-15** on inquiry card on page 1.

SAFETY CRANK ELIMINATES "KICK BACK"

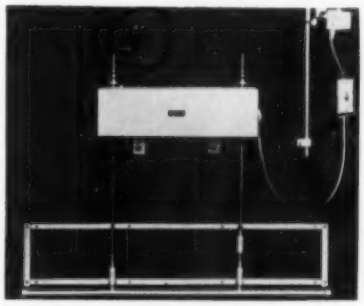
A new safety crank which eliminates the dangerous "kick-back" encountered when starting engines with a rope or crank has been placed on the market by Win-Well Manufacturing Company. The new type crank has four cams which are spring-loaded against the shaft hub to allow the crank to turn in one direction only. When the engine "kicks-back," the cams jam against the hub, stopping the "kick-back" instantly. The unit also has a friction clutch to let the engine move in a reverse direction and prevent damage to the crankshaft or adaptor. The "Win-Well Safety Crank" fits any engine which is started by means of a rope or crank. It has been tested and is used by many of the major companies in the oil, pipeline and construction industries.



For details, use **Key # MG-16** on inquiry card on page 1.

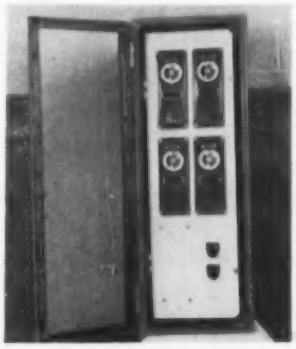
QUICK-ACTING AUTOMATIC PRESS CONTROL

Especially designed to provide protection for operators and dies on large, wide-bed presses which are usually difficult to safeguard, this new "Electro-Sensitive Control Bar," manufactured by W. I. Martin & Co., may also be used on many smaller presses of the hydraulic or air-clutch operated type. It acts as a fast emergency stop when anything goes wrong with the dies or the work and also serves as an automatic safety device which stops the press instantly if the operator's hand is in the danger zone when the ram descends.



The main control box is mounted directly on the ram and has a retractable "trigger-bar" extending across the front of the press to precede the ram on the downstroke. If the hand is within the danger zone, the control bar automatically stops the press before injury can occur. If incorrect positioning of work endangers dies, the operator can quickly stop the press by simply touching the control bar. For presses where projecting fixtures prevent the control bar from moving downward past the bolster, an automatic disconnecting switch is available which cuts out the control circuit just as the bar reaches the bolster. A transparent plastic shield mounted on the horizontal bar encloses the danger zone until the ram completes its downstroke, then moves up with the ram, clearing the die space for the next operation.

For details, use **Key # MG-17** on inquiry card on page 1.



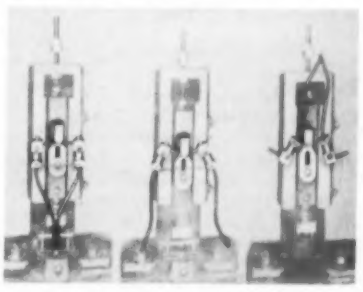
CONTROL PANEL "AUTOMATES" OLD PRESSES

A control panel for automating old style presses is now available from the Sahlin Engineering Company, Inc., manufacturers of "Iron Hand" press unloading equipment. Compact and convenient to attach, the panel provides an efficient way of actuating the timing of unloaders, die lifters, sheet loaders, dopers, etc. in relation to the press cycle. It can be used with virtually any old style press, and takes up a minimum of floor space.

For details, use **Key # MG-18** on inquiry card on page 1.

NEW HAND-SWEEP PRESS GUARD

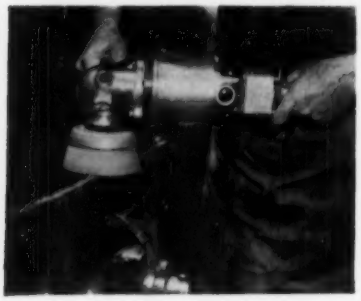
A new, low cost press guard that assures sweep action protection of operators' hands with every stroke of the press is called the "Norwood Guard," and is being marketed by the Norwood Findings Co. The "Norwood Press Guards" are claimed to be extremely adaptable and are easily installed with only



(Continued on next page)

two bolts on practically all models of small presses. The arms are adjustable and can be easily bent to sweep over the entire tool when necessary. It does not have to be removed from the press for job set-ups as its protector arms are easily snapped into an upright and out-of-the-way position. After fastening of new dies they snap back into position by a simple swing action.

For details, use **Key # MG-19** on inquiry card on page 1.



NEW GRINDING WHEEL GUARDS

The Black & Decker Mfg. Co. has introduced a new series of "Saucer Wheel Guards." These guards, designed for portable grinding wheels, are said to offer maximum protection, great strength and increased visibility. The new guard revolves with the wheel and should be used with threaded hole insert wheels. Other benefits, described by the manufacturer, include a new low price and the elimination of tool overload which occurs when a cracked wheel rubs a non-revolving type guard. The unit meets the specifications set forth in the American Standards Association's and the Safety Committee of the Grinding Wheel Institute's safety code. Units are light in weight and available in 4", 5" and 6" sizes.

For details, use **Key # MG-20** on inquiry card on page 1.

Elroy Bourgraf, director of marketing for *FERNO MANUFACTURING CO.* has announced the appointment of *A. B. Zoldak* as office manager for the stretcher equipment company. Zoldak is a graduate of Youngstown College. His duties at Ferno will include direction of all inside sales administration work, scheduling of Ferno production, and assisting company principals with the development of marketing activities.

inside the trade

J. W. Mahanay, Sales Manager of *THE CORNELIUS COMPANY*, announced the appointment of *Gene Wheeler* as sales representative for Cornelius portable compressors. Wheeler will assume direction of the sales program in the industrial, sports and fire department fields. His background includes sales experience with the John Henry Foster Company, sales and service depot for Quincy compressors and representatives for Joy compressors.

Appointment of two sales representatives for *IRON AGE SAFETY SHOES* has been made by *Harvey Childs, Jr.*, sales manager of that division of *H. Childs & Co., Inc. Donald A. Waples*, who will handle Iron Age Safety Shoe sales in the Michigan area, was formerly with the Cadillac Division of General Motors Corporation. He will make his headquarters at 27676 Shagbark, Royal Oak, Michigan.

David L. Hughes will cover Texas, Oklahoma, and part of Louisiana. Mr. Hughes, who has been in the safety equipment business since 1949, will headquarter at Houston, Texas—P. O. Box 9076.

BLAW-KNOX COMPANY, Pittsburgh, has announced that construction of a branch plant for its Power Piping & Sprinkler Division is underway at Jackson, Miss. According to *W. Cordes Snyder, Jr.*, president of Blaw-Knox the new facility will expand the company's service in the design, fabrication, and installation of piping systems for the oil, process, electric power and other industries in the South and Southwest. The new facility, comprising a building with 17,000 square feet of manufacturing space, will be constructed on a 15-acre site. Plans are designed to permit ready expansion of this initial facility. Operation of the new branch facility is expected to begin early next year.

George T. Henderson has been named sales engineer for the Los Angeles territory of the recently expanded *Technical Products Division, MINE SAFETY APPLIANCES COMPANY*, Pittsburgh. He has been with the company since 1937.

Victor J. Elliott has been named sales engineer for the Newark, N. J., territory of the *Technical Products Division*. He has been with MSA since 1951.

James G. Donohue has been named sales engineer for the Chicago territory of the *Technical Products Division*. Mr. Donohue has been with Mine Safety Appliances Company since 1953.

H. Duke Edwards has been named sales engineer for the Philadelphia territory of the *Technical Products Division*. He has been with MSA since 1952.

All four of the new sales engineers will provide design assistance and counsel on the installation and maintenance of instruments and process controls for industry in the area. They will also handle sales and engineering service for space filters, ventilation equipment and liquid oxygen converters.

The Wisconsin Science Supply Co. has announced the formation of a new division, *SCIENTIFIC PLASTICS*, for the sale of plasticware for laboratory and industrial use. Offered is a complete line of bottles, carboys, funnels, tubes, tanks, fittings, etc. made of polypropylene, polyethylene, vinyl plastic, polyurethane and nylon. *R. K. Johnson* is manager of the new division which is located at 1419 Underwood Ave., Milwaukee 13, Wis.

A new regional marketing program has been adopted by *THE FYR-FYTER CO.*, involving the relocating of key sales, credit and accounting personnel in three regional areas (Atlantic Coast, Central States and Pacific Coast). *Wm. M. Wetzel*, Chairman of the Board, announced that the new regional marketing system has been adopted so that the company's line of more than 1200 fire equipment products can be placed closer to the doorsteps of prospects and customers.

Manufacturing stocks of all of the company's nine fire equipment brands (*Globe, Pyrene, Fyr-Fyter, C-O-Two, Buffalo, Wooster Brass, SAFA, Dayton and Accessories*) are now being warehoused in 13 strategically situated branch warehouses so that prompt shipments of any stocked brand can be made to any one of the states.

The branch offices and warehouses, Mr. Wetzel explained, will be served by three new regional offices and warehouses which will be headquartered at the company's three prime manufacturing plants in Newark, N. J.; Dayton, Ohio; and San Francisco, Calif.

The company's Pyrene C-O-Two Plant in Newark will serve as headquarters for an Atlantic Coast Regional Office; Fyr-Fyter's Dayton Plant will headquarter a new Central States Regional Office; and the company's West Coast Plant in San Francisco will be the home office for a new Pacific Coast Regional Office.

Managers of the new regional offices, will be *C. S. Duncan*, Atlantic Coast Region; *W. E. Tromanhauser*, Central States Region; and *Don Mathewson*, Pacific Coast Region. *Paul E. Warren* has been appointed as Sales Manager for the Atlantic Coast Region, and *George Clark* will serve in the same capacity for the Central States Region. A Sales Manager for the Pacific Coast Region will be announced at a later date. *A. J. Attenweiler, R. A. Griffy* and *Duane Hudson* respectively were named as controllers for the three regions.

Special hazard and system engineers are also being staffed at each of the regional offices, enabling distributors and their customers to obtain prompt engineering assistance on automatic sprinkler, C-O-Two and other fixed fire protection systems.

So that all of the company's nine brands can be promoted properly in the field, Mr. Wetzel further announced that the corporate marketing staff of *A. C. Trautwein*, Senior Vice President and Director of Marketing, has been enlarged to include eight national product managers: *C. T. DuBreuil*—assisted by *Burr Williamson*, C-O-Two Carbon Dioxide and Dry Chemical Fire Protection Systems and *W. Tamburro*, Foam Fire Protection Systems—in Charge of Sales Development and Sales Engineering for all types of Special Hazard and Engineered Systems; *C. T. Mallory*, GLOBE AUTOMATIC Sprinkler Systems; *J. Ray Norris*, Electronic and Mechanical Sirens; *Ken Rearick*, WOOSTER Brass fire hose nozzles and related hose line equipment; *M. W. Wallace*, SAFA fire alarm systems; *John W. Lohrey*, miscellaneous fire department and accessory equipment.

Mr. Wetzel added that a new Canadian Regional Office had already been established temporarily at Hamilton, Ontario, but that this office would be moved soon to the site of a new Canadian Plant in Toronto. *James J. Dunleavy*, Senior Vice President, has been assigned to organize the regional operation in Canada, as well as to head up the company's government and export activities. *Harry Lyon*, who has been appointed Sales Manager for the Canadian Region, is assisting Mr. Dunleavy.

Northern Ohio's largest and most complete industrial safety equipment and supply department has been established at *STRONG, CARLISLE & HAMMOND*, Cleveland industrial distributors, according to the firm's vice president and general manager, *Thomas S. Bednar*. In connection with opening the new department, SC&H has published a 200-page catalog of safety equipment which covers more than 500 separate items.

Heading the department is *L. J. Lackner*, a veteran safety engineer and chairman of the Cleveland chapter, American Society of Safety Engineers. On Lackner's staff are *Bernard Manion* and *Jack Savage*.

In addition to the safety staff, the 26 SC&H general supply salesmen who cover all of northern Ohio will handle the new safety equipment and supply line. The safety equipment items will be on display at the distributing house, 1394 West 3rd Street, and at the company's Construction Machinery Mart, 215 Brookpark Road.

Roscoe H. Garrett has been appointed sales manager for *THE SCAM INSTRUMENT CORPORATION*, Chicago, manufacturers of industrial monitoring systems. A registered professional engineer, Mr. Garrett brings a versatile engineering background to his new position. He was with the Dynamatic Division of Eaton Mfg. Co., Kenosha, Wisconsin, for 15 years, leaving there as chief electrical engineer. He was also with the Selcon Division of the Diversey Corp., Chicago, working in engineering and sales. Mr. Garrett holds a BSEE degree from the University of Wisconsin, and served in the army during World War II.

THE R. E. DIETZ COMPANY, Syracuse, New York, announces a grant to the Regents of the University of California, Berkeley, California, for the support of a one year study entitled "Portable Roadway Hazard Warning Devices." Purpose of the grant which will supplement continuous studies of the Dietz Safety Research Staff in laboratories and on actual job locations, is to assure that hazard warning devices offer the best possible protection in terms of product design and performance, and that users can be more fully educated to their proper use and maintenance.

William H. Koop

Appointment of *William H. Koop* as General Sales Manager has been announced by *TECT, INC.* of Northvale, N. J. Mr. Koop will assume full responsibility for the distribution of the company's line of safety solvents and detergents throughout the United States and in Canada. He is a graduate of the University of Washington and served with the Navy Air Corps in World War II. He was with the George S. May Company, Business Consultants, and was previously Sales Manager for the Western Chemical Co. and Buitoni Foods Corp.

The Clarke Sanding Machine Company of Muskegon, Michigan, one of the nation's largest producers of floor maintenance machines, has announced the change of its name to the *CLARKE FLOOR MACHINE COMPANY*, according to *Ernest Cooper*, president. The change became effective January 1, 1959.

The company has also purchased a new building in suburban southwest Muskegon, necessitated by increased business growth and expansion of the company's line of equipment. The company recently added power sweepers to its line of floor maintainers, heavy duty wet-dry vacuum cleaners, floor sanders, edgers, and hand sanders.

THE PIONEER RUBBER COMPANY of Texas has announced the appointment of *Jerry Kellam* as their new sales representative for safety gloves with headquarters in New Orleans, Louisiana. Mr. Kellam has had extensive experience in the field of industrial merchandising previous to his joining Pioneer. His territory includes Arkansas, Louisiana, Mississippi, western Tennessee and the Houston, Texas area.

The appointment of *Strong, Carlisle & Hammond*, 1392 West Third Street, Cleveland 13, Ohio, as stocking distributors for guide pin covers in the state of Ohio has been announced by the manufacturer, *CENTRAL SAFETY EQUIPMENT CO.* of Philadelphia. *Louis J.*

THE POSITIVE LADDER SAFETY DEVICE LOCKS-IN-A-NOTCH!

Prevents death and injuries from falling.
If climber starts to fall, device locks in a deep notch on carrier rail and limits fall to approximately 6 inches —distance between notches.

LOCKS AUTOMATICALLY and INSTANTLY—HOLDS SECURELY

Will catch and hold workman if he starts to fall, even if unconscious. Cannot slip on down ladder. Requires no attention from climber; he climbs in normal manner. Inexpensive. Easy to install; 3 men can clamp it to ordinary ladder in few hours. Clamps to any rung ladder, peg ladder, pole or framework. No welding or cutting. Notched rail hot-dipped galvanized. Entire equipment rust and corrosion proof. Can be kept free of ice by applying heat inside the carrier rail. In use approx. 11 years. Approved by Safety Engineers and Government Agencies throughout country. Patented. Manufactured only by

SAFETY TOWER LADDER CO.
1024 Burbank Blvd., P.O. Box 1052
BURBANK, CALIFORNIA

(Use Key # B-14 on Inquiry Card on page 11)

Lackner, manager of the Safety Division of Strong, Carlisle & Hammond, will supervise the handling of the devices.

S & W Safe-T-Lite (formerly Sullivan Hardware), Waterford, California, has been named a stocking distributor for *PACIFIC MERCURY* warning lights. Well known distributors of safety equipment, power tools and hand tools, the company will stock both neon and transistorized models and will also maintain a complete parts and service department, according to manager *Darrell White*.

Levitt-Safety, Ltd., has taken over distribution of *ANSUL* dry chemical fire equipment for the entire Dominion of Canada. Levitt has been Ansul's distributor in eastern Canada for the last 12 years. Its headquarters are at 747 Vaughan Road, Toronto. Manager for Levitt's new western region is *Dick Anderson*, whose new office will be in Edmonton, Alberta. From his previous base in Winnipeg, Anderson has managed sales in northwestern Ontario and Manitoba for Levitt since 1952.

In addition to Edmonton, Levitt has established two other offices for the western region. Levitt's new office addresses and representatives are: Levitt-Safety, Ltd., 889–891 Westminster Ave., Winnipeg 10, Manitoba; 10205 105th Ave., Edmonton 5, Alberta; Industrial Supply Company, 1005 Winnipeg St., Regina, Sascatchewan; Silver Line Fire Equipment Co., Ltd., 720 Alexander St., Vancouver 4, British Colombia.

The formation of *SAHLIN ELECTRIC COMPANY*, Hazel Park, Michigan, wholesalers of electrical supplies for commercial and industrial applications, has been announced by *Richard Sahlin*, President of *Sahlin Engineering Company*, manufacturer of press unloading equipment. The new company will maintain inventories of a variety of electrical equipment, including switches, conduit and wire, as well as a complete line of Clark Motor Controls.

Serving metropolitan Detroit, Pontiac and Grand Rapids, Sahlin Electric Company will be headed by *Joseph Hoffman*, general manager, formerly with Commerce Electric Supply and Great Lakes Electric Supply, both of Detroit. *Bern Marsack* and *Thomas Robinson*, both formerly associated with General Electric Supply Company of Detroit, will act in sales executive capacities. Mr. Robinson is sales manager of the newly-formed firm.

Dr. Uno Ingard of Massachusetts Institute of Technology has joined *INDUSTRIAL ACOUSTICS COMPANY, INC.*, as staff consultant for research and development, it has been announced by *Martin Hirschorn*, president. Dr. Ingard, who has been associate professor of Physics at M.I.T. since 1955, will direct various projects in basic and applied research in Industrial Acoustic's aerocoustics laboratory.

A Fellow of the Acoustical Society of America and recipient of its annual "Biennial Award" in 1954, Dr. Ingard has had wide professional experience in physics, electronics and acoustics both in Sweden and the U.S.A. He is the author of numerous papers published in the fields of electronics and acoustics.

The Heifred Company has recently purchased the *Hustler Corporation*, electric lift truck producers located in Willoughby, Ohio. The leaders of this new group will take over active management; however, the former president, *R. V. Woodley*, will remain in the post of Sales Director. The new name of the company will be *THE HEIFRED CORPORATION*.

It is planned to gradually expand the activity of the company in the continued development of lift trucks and similar equipment for materials handling applications. The new purchasing group is headed by *Henry Hein* and *Zigmund Fredericks*. The present line of HUSTLER lift trucks and personnel carriers is being continued under the same basic designs as developed by the original company.

According to an announcement by *James N. Alcock*, the *SAGINAW WELDING SUPPLY CO.* has sold to two of its former employees some of the lines not directly related to welding as such. The Safety and Steel Shop Equipment Division is being taken over by *Donald S. McGill* and will be operated as *McGill Sales* with headquarters at 1905 S. Michigan Ave., Saginaw, Mich.

Another former employee, *Howard Zessin*, in partnership with *Robert George*, has taken over the Page Chain Fence Division and is operating it as *Fence Fabricators*, whose address also is 1905 S. Michigan Ave.

The Schrader Industrial Air Control line has been transferred to the firm of *Gransden-Hall & Co.* with warehouses in Flint and Saginaw.

A. A. Passarello has been appointed manager of the midwestern distributing branch of the *ZENITH RADIO CORPORATION Hearing Aid Division*, it was announced by *E. M. Kinney*, Zenith vice president and hearing aid division general manager. Before assuming his new position, Passarello was assistant manager of the hearing aid division in New York.

Safety Appointments

Raymond E. Melampy has been appointed safety engineer for Armco Drainage & Metal Products, Inc., a subsidiary of Armco Steel Corporation. The announcement was made by M. C. Patton, executive vice president of the company.

Melampy joined Armco in 1940. He held a variety of positions in the sales division and in 1947 transferred to the personal relations department at the company's Middletown, Ohio, Works. He moved to the industrial engineering department in 1949, and was made a junior time study man in 1951.

In 1953, Melampy returned to the personal relations department as safety advisor. Earlier this year he was assigned to Armco Drainage as safety engineer on a temporary basis. Melampy holds a degree in industrial management from Miami University.

Gerald J. Walke has been appointed an assistant engineer in the health physics section at Allis-Chalmers and has been assigned to the firm's Greendale Laboratories.

A mechanical engineering graduate of the University of Detroit, Walke recently completed Allis-Chalmers training course for graduate engineers. He is a member of the Society of Automotive Engineers and the American Society of Mechanical Engineers.

Appointment of *John J. Ahern* to the newly-created position of Director of Security for General Motors has been announced by Louis G. Seaton, GM Vice President in charge of Personnel Staff. Since 1945 Mr. Ahern has been professor and director of the Department of Fire Protection and Safety Engineering at Illinois Institute of Technology, Chicago. He has served as consultant to General Motors on fire protection since August, 1953. Mr. Ahern will be responsible for coordinating with GM divisions practices in safety, plant protection and fire protection.

Following graduation from Illinois Institute of Technology with a degree in fire protection engineering in 1935, he worked as fire protection engineer for the Michigan Inspection Bureau. He served as a special agent for an insurance company for several years before joining the U. S. Ordnance Department in 1942, for which he conducted war training programs in explosives and industrial safety.

Mr. Ahern is a member of the Civil Service Commission in Chicago, and past president of the Greater Chicago Safety Council. He served as the first president of the Society of Fire Protection Engineers. He was secretary of the President's Conference on Fire Prevention in 1947 and has acted as consultant for major insurance, industrial and utility companies, as well as the Chicago Fire Department.

Careers In Safety

The opportunities offered by industry to young people choosing a career in industrial safety, are described by Frederick J. Peters, safety director, New Britain Machine Co., New Britain, Conn. in a unique publication that has achieved universal text-book status in Connecticut.

His chapter is one of 27 articles on industrial vocations. The author of each analysis is a person who has attained success in his or her particular field.

The booklet, entitled "Planning Your Future in Connecticut Industry," is distributed to secondary schools by the state's four major electric utilities as an educational and public relations undertaking. It is used in over 90 percent of the state's secondary schools, primarily in guidance instruction. More than 170,000 copies have been distributed to Connecticut's high schools in the past five years.

Covered in each article are: Schooling, major duties, personality requirements and advancement possibilities in each field.

Mr. Peters is associated with many safety organizations. He is presently chairman of the Industrial Committee of the New Britain Safety Council and is secretary of the Hartford Industrial Safety Council. Peters also holds membership in the Connecticut Safety Council, the National Safety Council and the American Society of Safety Engineers.

He has attended a number of advanced courses on industrial safety prevention at New Haven College and the National Safety Council in Chicago and at Civil Defense meetings on a local and statewide basis. He is also active in the Red Cross as chairman of first aid training in his local chapter.

The career book is sponsored by the Connecticut Light and Power Co.; the Hartford Electric Light Co.; the Housatonic Public Service Company and the United Illuminating Company.

Noise Simplified

H. H. Scott, manufacturers of instruments for the measuring and analysis of sound, has announced the publication of a new edition of their booklet, "Noise Simplified," by Victor H. Pomper. The booklet contains useful non-technical information on instrumentation, measurement, analysis and control of noise.

The pamphlet is designed to aid management in its efforts to protect employees from the possible harmful effects of uncontrolled noise. Copies are available free by writing to: H. H. Scott, Inc., Dept. P, 111 Powdermill Rd., Maynard, Mass.

Thorium: Atomic Power

Uranium is still the principal element being processed for military and civilian nuclear energy purposes, but there is a growing interest in the use of thorium as an additional source of nuclear fuel for atomic power.

Considerable research is being done on thorium, and its potential importance is said to far exceed its present industrial status. Few concerns are familiar with the properties of this radioactive material and may find themselves faced with health and safety problems in the handling and processing of thorium and any of its alloys and compounds.

In an attempt to provide the answers to many of these problems, the Accident Prevention Department of the Association of Casualty and Surety Companies has just published a report entitled "Thorium—Its Compounds and Alloys." The information contained in the publication deals with the properties and production, the health hazards and the handling of this radioactive material; information which has not been previously available in one publication to the insurance industry.

The report is divided into three parts. The first, covering properties and production, discusses physical constants and general properties, occurrences and ores, radioactivity, and a review of industrial processes. The second part, on health hazards, deals with the chemical and radiological toxicity of thorium, maximum acceptable concentrations, monitoring, hazards and control in industrial processing, general personnel health control measures, and decontamination procedures. The third part, on handling, discusses the pyrophoric nature of thorium metal, fire hazards in thorium metal operations, fire fighting, storage, shipment of thorium and its compounds, and disposal of low level radioactive thorium wastes.

James F. Van Namee, director of the Engineering and Research Division of the Association's Accident Prevention Department, said the re-

port is the latest in a series of Chemical Hazards Bulletins prepared by the Association's Special Hazards Committee, which regularly investigates and reports on processes, materials and techniques that constitute some present or potential hazard to industry or to the public.

The Chemical Hazards Bulletins are a copyrighted service provided by the Association to its 137 capital stock and surety member companies. The public may obtain copies by contacting their local independent insurance agent or one of the Association's member companies.

Functional Color Kit

A Functional Color Kit for architects, designers, builders, and maintenance men, showing how to use color scientifically to promote efficiency through better seeing conditions, avoidance of eye strain, and improved human and public relations, has been announced by Colorizer Associates, group of 13 paint manufacturers in the U. S. and Canada.

The kit includes four distinct brochures, each giving detailed color specifications for institutions in one of the following categories: motels, schools, hospitals, industrial plants. In addition, a set of recommended color standards, with 36 paint chips, is included to permit specifying paint colors by color number. These Colorizer functional paint colors have been carefully chosen for industrial and commercial use—as distinct from home use—by a foremost authority on color. They include three groups of colors, according to application and function: First, "Functional" colors, a group of grayish tones designed to relieve glare and simplify maintenance; second, "Decorative" colors, a group of cleaner, brighter hues best adapted for color-styling recreation areas, stores, hotels, etc.; and "Special" colors, brilliant hues, chiefly used in industrial plants for safety marking and color relief. Reflectance is given for each color.

Further information is available from Colorizer Associates, 345 North Western Avenue, Chicago 12, Illinois.

Home Course In Maintenance Methods

The National Sanitary Supply Association has prepared a comprehensive home study course designed to 1) cut maintenance costs, 2) increase safety and efficiency, and 3) improve the appearance of your establishment.

The course, called "Modern Cleaning Methods," is designed for home study by maintenance supervisors, custodians, and other service employees. Complete information is available to executives in business and institution management. Write to National Sanitary Supply Association, 159 N. Dearborn St., Chicago 1, Illinois.

The home study course has been compiled with the help of leading sanitarians, efficiency experts, and the manufacturers and distributors of sanitary supplies and equipment. The course is written in simple, concise fashion. It consists of thirteen lessons, each of which includes a test. After studying the lesson, the student completes the test and mails it to the National Sanitary Supply Association for grading. Upon successful completion of the course a certificate is awarded.

"You're not using your head, Mr. Wolfstern! If one of us trips and falls, no safety plaque this month."

The lessons cover the following subjects: Planning an Efficient Cleaning Program, Bacteriology, Communicable Diseases, History of Sanitation I and II, Personal Hygiene, Facts About Brushes, Washing Windows, Walls & Ceilings, Sanitation Chemistry I & II, Metal Cleaning, Facts About Wax, and Floor Care. Leading Medical and Sanitation experts across the country have praised the potential effectiveness of this course to improve cleaning and maintenance standards where it's needed most—by the custodians themselves.

"When the people that do the cleaning have an opportunity to learn better ways to do their work, in language they can understand, costs go down, and efficiency, appearance and safety go up," stated Mr. Harold Pond, President of the National Sanitary Supply Association.

Fire Causes Studied

Fire is an ever-present hazard in the laboratory, ready to take advantage of any slip and destroy promising experiments, irreplaceable records, valuable equipment and even the lives of laboratory workers. Yet fire protection is all too often an after-thought in both the planning and operation of laboratories, a new study of the National Fire Protection Association indicates.

The NFPA report, published as Fire Record Bulletin FR 58-3, is a point-by-point analysis of the principal causes of laboratory fires and recommendations for their prevention, along with actual case histories. More than a dozen causes are listed, ranging from electrical wiring and misuse of flammable liquids to spontaneous ignition and open flames. There was failure to provide the protection of automatic sprinklers in almost 90 percent of the fires studied. Major factors contributing to the spread of fire were structural weaknesses like open stairwells, no fire walls, combustible interior finish, and lack of fire stops and fire doors. Improper storage and handling of flammable liquids and chemicals was noted in about 25 percent of the cases studied. At least one death or injury is attributable to each laboratory fire, on the average, the NFPA study shows.

The report analyzes in detail more than 50 fires in both indus-

trial and institutional laboratories to point out the most significant features of laboratory fire protection.

The new 16-page illustrated bulletin is the 34th in the series of occupancy fire records issued by the National Fire Protection Association, international clearing house of fire safety information. Covering structures ranging from homes and schools to supermarkets and banks, they may be obtained (at 50¢ per copy) from the Association's headquarters at 60 Batterymarch St., Boston 10, Mass.

Radiation Protection Manual Published

A comprehensive handbook of internationally compiled recommendations for users of radioisotopes has been published by the International Atomic Energy Agency, in Vienna.

The "Manual of the Safe Handling of Radioisotopes" covers organizational, medical and technical aspects of safety practices. It is IAEA's first technical publication.

The recommendations have been prepared by a panel of 13 experts from ten countries under the chairmanship of Professor Gunnar Randers of Norway. Their work is based on studies of existing manuals and regulations in use in member countries and on similar work already carried out by other international organizations on more limited aspects of the problem and on comments received from member governments.

The Board decided that the Manual, which will be periodically revised, should provisionally govern the Agency's operations in the radioisotope field and its universal importance was emphasized by the recommendation that all member states take it into account in establishing national health and safety regulations or practices.

The "Manual of the Safe Handling of Isotopes" is published in English. French, Russian and Spanish versions will follow in the near future. The book is obtainable from IAEA, price U.S. $1.00.

Driver Fatigue

Most driver-asleep accidents occur after the operator has been at the wheel only a few hours, according to a new booklet, "Driver Fatigue," published for employers and supervisors of commercial vehicle drivers by the National Association of Automotive Mutual Insurance Companies.

What this and other evidence proves, according to the booklet, is that off-duty activities or lack of sleep are likely to influence on-duty performance. A large percentage of all long-haul trucking accidents occur during the first 3½ hours of driving.

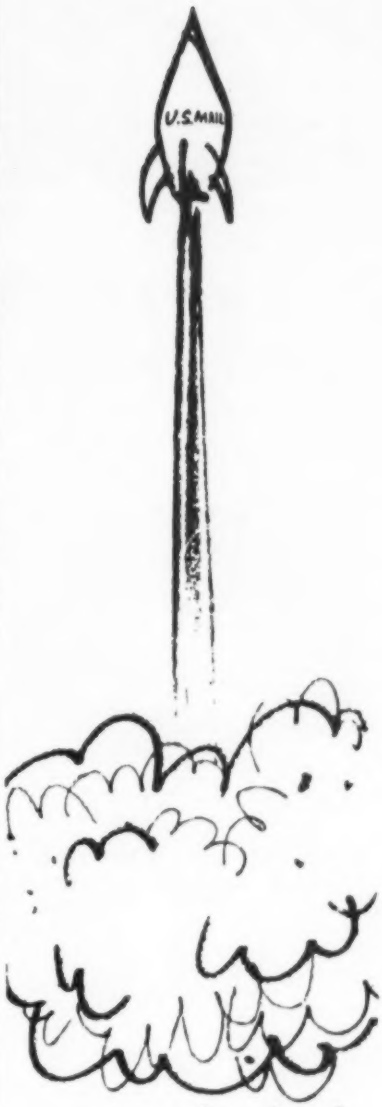
Professional drivers, even with the safeguards of normal operational precautions, are no more immune than ordinary citizens from acute exhaustion, deterioration of skill and marked reduction in overall efficiency of performance, according to the booklet. It is based on research data prepared by the Harvard School of Public Health under direction of Dr. Ross A. McFarland.

Causes of Fatigue

Usually there is a combination of several factors which may bring about driver fatigue. In some instances the causes may trace to excessive hours of driving, long exposure to high noise levels, extremes of climate, or poor living conditions. In other cases the cause may be more psychological than physiological, precipitated by fear and anxiety or social maladjustment.

Use of drugs to combat sleepiness is the one "forbidden" measure in the fatigue control program which the booklet outlines for company management and drivers. Dangers involved in such drugs are so great that this alternative should not be permitted, the booklet says. There is a point beyond which drugs will not keep a driver awake. And, more important, failure of the drug comes without warning.

If a driver is troubled by personal maladjustments and worries and is unable to sleep, he should be taken off the job until his troubles are resolved, the booklet recommends.



zone mail indeed results in speed

The Post Office has divided 106 cities into postal delivery zones to speed mail delivery. Be sure to include zone number when writing to these cities; be sure to include *your* zone number in *your* return address — after the city, before the state.

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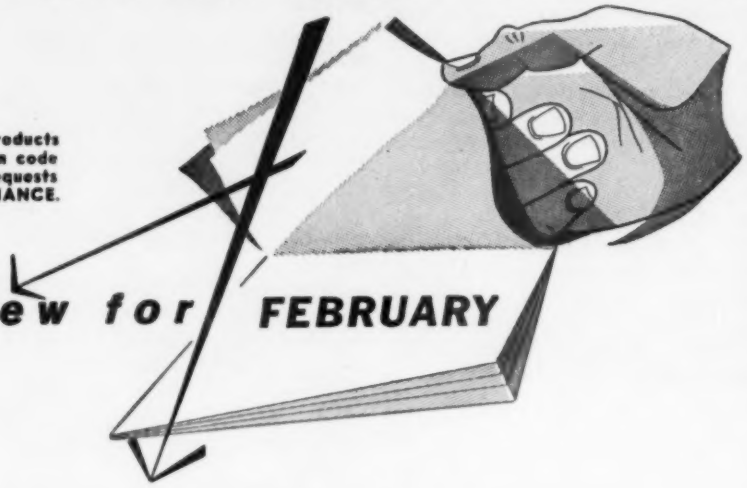
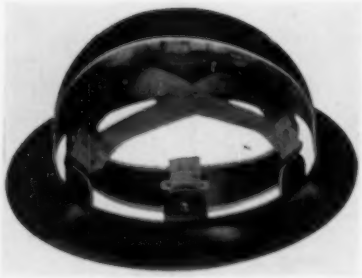


what's new for FEBRUARY



NEW SAFETY HAT SUSPENSION

(Use Key # 733 on Inquiry Card on page 1)

WILLSON PRODUCTS industrial safety hats now have the scientifically designed "Geodetic" strap suspension for more effective protection against impact shock. This suspension system was developed by the Cornell Aeronautical Laboratory for use by the Armed Forces and in athletic equipment. The new suspension fits the contours of the head. Impact from a blow or falling object is dissipated so the wearer can sustain a much heavier impact shock without injury. The suspension is designed to minimize danger of "bottoming" since it conforms to the head. The gripping effect reduces the danger of the hat shell tipping and crashing against the wearer's head.

The crown straps in the "Geodetic" system are permanently fitted to maintain 1¼ inches between the top of the head and the hat shell. The Cornell Laboratory proved that death or serious injury from head blows often results from shock transmitted to the brain through a conventional head harness, even though the hat shell may not be penetrated. With the "Willson" hat, the proper suspension is maintained so that protection remains constant. Suspension safety hats are available in various models to fit any requirement.

BORON HYDRIDE DETECTOR

(Use Key # 734 on Inquiry Card on page 1)

PRESENCE OF only 10 parts per billion (0.1 ppm) of pentaborane or decaborane in air, and of 0.1 ppm of diborane, can be detected and measured by a new portable colorimetric spot test instrument, developed by Mine Safety Appliances Company, for detecting and measuring toxic concentrations of boron hydrides. The unit comprises a positive displacement hand pump with sampling head for filter paper, reagent solution sealed in a glass ampoule contained within a polyethylene syrette along with a dry reagent, a color comparison card and calibration chart.

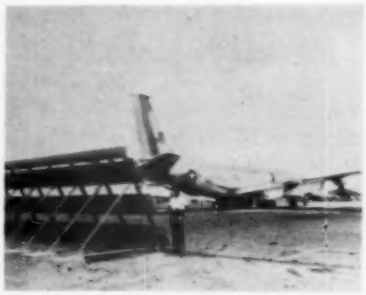
To prepare for atmospheric tests the syrette is squeezed to break the ampoule, the two reagent materials are shaken to mix them, and a drop is added to a filter paper in the pump head by means of a dropper nozzle on the syrette. The number of pump strokes required to produce on the filter paper a color to match with the reference standard is the index of borane concentration. Upper limits of measurement are approximately 3 ppm for diborane and 1 ppm for pentaborane and decaborane. The solution in one syrette will make 20 tests and is good for 24 hours.

GAS-OPERATED AUDIBLE WARNING SYSTEMS

(Use Key # 735 on Inquiry Card on page 1)

WARNING HORN systems are now available for portable or fixed installations for indoor and outdoor, emergency or routine signaling. The Falcon Alarm Co., Inc. states that these self-contained units are dependable for safe, gas-powered operation in hazardous vapor areas. Horns emit an extremely loud blast that is audible up to a mile or more from its source, even over industrial background noise. Manual or electrical controls for general industrial use help increase the system's serviceability. Units are especially suited for installation in or near chemical plants, refineries, power plants and mines, etc.

Advantages include low cost, reliability and independence from fallible power sources. One or more power cylinders of gas, strategically located near exits, in control rooms and other areas, may be connected with tubing to several horns in operating or working areas, indoors or out. Any cylinder, once released, will sound all the horns in the system.



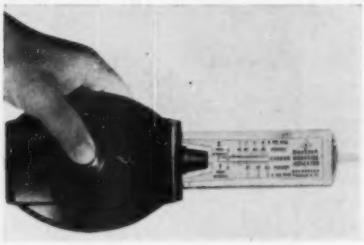
JET BLAST DEFLECTOR

(Use Key # 736 on Inquiry Card on page 1)

WITH JET airlines going into service, the Lynn Engineering Co. announces development and production of a new low-cost jet blast deflector designed especially for the airlines. Whereas other jet blast fences attempt smooth efficient deflection vertically, the new "Lynnco Blast Diverger" diffuses or spreads the blast upward through horizontal openings in the fence. This causes rapid loss in blast energy to reduce noise, prevent soil erosion, and protect people and equipment from hot jet blast. It also reduces hazard to low flying aircraft which might inadvertently fly through blast, the manufacturer states.

Photograph illustrates fence construction, which comprises a prefabricated structural framework supporting spaced corrugated panels which act as deflector vanes. Gaps are adjustable at assembly and provide the "see-thru" feature. This design also reduces stresses permitting lighter-weight, about 47 pounds per lineal ft. Height is approximately 9 ft. Upthrust on fence due to blast load is eliminated. All parts are heavily galvanized.

A horizontal gap at eye level permits passengers and bystanders to see what is going on around aircraft while safely protected from blast and noise. Pilots and ground crews can "see through" the fence while taxiing or moving equipment which is an operational safety feature. Fence is semi-portable, can be erected by two men with no special tools, and nests for easy air or land transportation.



DIRECT-READING CARBON MONOXIDE INDICATOR

(Use Key # 737 on Inquiry Card on page 1)

BACHARACH INDUSTRIAL Instrument Company has introduced a pocket-size "Monoxor" CO Indicator for detection and direct percentage measurement of carbon monoxide. The instrument, mechanically-operated, has no electrical circuit and therefore may be used in the presence of flammable gases. Because it indicates percent CO by measurement of the length of a stain developed in an indicating tube, it assures accurate reading over an extremely wide range of lighting conditions.

The indicator is suited for safeguarding life and health wherever carbon monoxide hazards may exist in confined spaces such as mines, vehicular tunnels, bus terminals, garages, parking stations, holds of ships, storage bins and tanks, aircraft hangars and public utility mains, as well as in industrial plants in connection with such operations as metal and chemical processing, coking, artificial gas production, petroleum refining, forging, acetylene welding, smelting, casting, textile finishing, ceramic manufacturing, etc.

A carbon monoxide test is made by depressing, then releasing the pushbutton of the instrument's sampling pump, thus drawing a controlled sample volume through a replaceable glass indicating tube. The sealed ends of the tube are broken open just prior to use. The tube contains a yellow-colored CO-sensitive palladium compound impregnated in highly purified silica gel together with a guard gel for removing smoke, fumes, and gases other than carbon monoxide. Presence of carbon monoxide in the sample tested is shown by the development of a brownish-gray stain on the indicating tube's yellow-colored gel. The indicator has 4 scales; the range of each scale depends on the number of pump strokes. For sensitivity, the number of pump strokes may be increased. Each pump stroke draws a 16 cc sample through the indicating tube.

The "Monoxor" can be used in ambient temperatures from —70°F to +125°F. Its indicating tubes may be capped and retained for examination and measurement for periods up to 24 hours. Each indicating tube may be used for two tests at the CO concentrations normally encountered in safety work. The instrument measures 5" x 4" x 1½". It is supplied with 12 indicating tubes and 6 tube caps in a metal carrying case.

NEW SILICON RECTIFIER

(Use Key # 738 on Inquiry Card on page 1)

A COMPLETE LINE of new silicon-rectifier battery chargers, providing voltage control for stand-by batteries, has been introduced by Exide Industrial Div. of The Electric Storage Battery Co. Using an electrical rectifying system for converting alternating current to the direct current required for battery charging, the new units are controlled by a magnetic amplifier with a sensing control circuit to maintain proper charging voltage. The new chargers are for use with stationary batteries in electric utility service, in emergency power and lighting and in other float-charge battery applications in which accurate charge control is essential.

Designed for floor, wall or rack mounting —depending upon size—the new chargers come in 27 basic models, for use with batteries having from 11 to 62 cells. Both single- and three-phase units are available, having an output range of from 1 to 400 amperes. Single-phase units can be operated at 115 or 230 volts; three-phase units at 230 or 460 volts. All models are equipped with voltmeters, voltage-adjusting potentiometers and an a-c failure alarm relay. All have 0- to 24-hour adjustable timers to control the length of periodic equalizing charges. Ammeters are standard on 60-cell sizes and on other models rated at 25 or more amperes.

"SHOW-CASE" CARRYING KIT

(Use Key # 739 on Inquiry Card on page 1)

THE "SELLSTROM Safeguards Show-Case" is the name of a new portable safety display kit developed by Sellstrom Manufacturing Co. The kit contains 12 different eye protection items for welders and can be carried from one department or plant to another.

A colorful hinged carton was specially designed for the handy "Show-Case" package; containing 118 products such as goggles, side shield glasses, welding lenses and plates, headbands and dust respirators, the carton doubles as a stocking-shipping-carrying case and a counter display case for store or shop. The manufacturer states that the contents of the "Show-Case" includes every item necessary to meet 90% of all welders' eye protection requirements, being virtually a basic, or starter, stock of those items.

NEW ANCHORING COMPOUND

(Use Key # 740 on Inquiry Card on page 1)

A NEW, fast-setting grouting cement for securely fastening machinery, hand-rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts, has been introduced by The Garland Co. Known as "Anchor-Tite," the material is described as a scientifically-blended, free-flowing, rapid-setting welding agent for concrete and masonry. It is also recommended as a quick-patch for small, shallow depressions and cracks in concrete floors. According to the manufacturer, the dominant feature of the compound is the expanding action that occurs during setting. This action, it is said, assures its permanent tying down of the patch to the concrete.

The product is reputed to be oil-resistant, non-shrinking, self-bonding, and self-leveling. Tests indicate that "Anchor-Tite" has a compressive strength of over 4500 lbs., p.s.i. after one-hour set and adheres readily to old or new concrete without requiring bonding materials. Applied cold, there is no heating hazard and the material can be easily prepared on the job for instant use. Available in 50 lb., 125 lb. and 250 lb. fiber drums.

HEAT AND CHEMICAL RESISTANT FABRIC

(Use Key # 741 on Inquiry Card on page 1)

A NEW LIGHTWEIGHT material for protective clothing that has superior resistance to chemicals and solvents at high temperatures has been developed by the Du Pont Company's Fabrics Division. The material is a "Fairprene" coated fabric, made of "Dacron" polyester fiber coated with "Viton" synthetic rubber. It will withstand long exposure to temperatures as high as 300 degrees Fahrenheit, and is resistant to acids, alkalis, solvents, oils, lubricants, fuels, ozone, and weathering. The "Fairprene" coated fabric is supplied to the clothing manufacturer in the uncured or unvulcanized state. This permits the manufacturer to seal the seams dielectrically in the uncured state and then vulcanize or cure the entire garment to eliminate the need for sealing seams with adhesives or cements that might be affected by solvents. These protective properties are combined with extremely light weight. The material is .008-inch thick, and weighs only nine ounces per square yard.

NEW DRY CHEMICAL PORTABLE EXTINGUISHERS

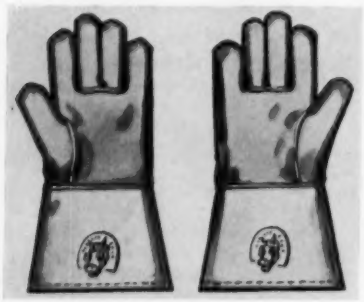
(Use Key # 745 on Inquiry Card on page 1)

TWO NEW pressurized dry chemical portable fire extinguishers have been announced by Walter Kidde & Company, Inc. The new streamlined models come in 2½ and 5 pound capacities and were designed by Kidde engineers working closely with Henry Dreyfuss personnel. According to Kidde, their designs stress simplified, self-evident operation for anyone picking up a unit in a fire emergency. Simply aim the discharge nozzle at the base of the fire and

push the easily depressed actuating lever. Immediately a cloud of fire killing dry chemical envelops the blaze.

Lightweight and functionally designed, they are easy to carry and handle . . . even with a gloved hand. Their rugged pressure gauges, recessed in the housing for added protection, tell at a glance if they are charged and ready for action. Their operating range of from 110 to 180 psi means that they can be easily and quickly recharged with air or nitrogen. Their special wall brackets act as the locking pin and discourage accidental discharge.

The new 2½ and 5 pound portables are approved by Underwriters' Laboratories and Factory Mutual. Their high U.L. extinguishing efficiency ratings are 4-B:C and 8-B:C respectively.



REVERSIBLE WELDER'S GLOVE

(Use Key # 746 on Inquiry Card on page 1)

THE WELDING industry has long awaited a reversible glove that is really reversible. It is now available from Singer Glove Mfg. Co. The front and back of the glove are identical in pattern—there are no exposed seams on either side. This affords true interchangeability as the glove fits with equal comfort and feel on either hand. Soft, flexible heat-resistant genuine horsehide, first choice of the welder on the job, has been used in this new patented glove which took 8 years to design and perfect. Even the color is different—brown and green. Aptly named the "Singer Solo" the glove comes packed singly, which means it can be ordered three at a time instead of a pair. The manufacturer states that in actual tests three single gloves have lasted as long as two or three pairs of ordinary welder's gloves.

EMERGENCY POWER SOURCE

(Use Key # 747 on Inquiry Card on page 1)

FRANCIS BROS. have announced a series of new products known as "Toro-Pak" units to supply DC or AC power where none exists or for emergencies during power failures in military, industrial, marine and civilian defense applications. Model P14-65, now in production, supplies 110 volt, 60 cycle single phase power up to 200 watts continuous output for eight hours or more. It will also provide 12 volts DC current for an extended period. The unit can then be recharged with AC or DC current in several hours. This portable model unlatches into two identical units for easy carrying. Handles are provided for this purpose. Intended uses are the operation of small electrical motors, tools, lights, radio, portable television, hospital operating equipment, U.H.F. and V.H.F. communication and test equipment, missile ground support equipment, etc. and to supply campers, yachtsmen and home builders electrical needs. Available with either a conventional or transistorized circuit.

PORTABLE EMERGENCY OXYGEN KIT

(Use Key # 748 on Inquiry Card on page 1)

AN EMERGENCY medical oxygen kit, manufactured by the Montbell Products Corp., offers a standard "D" cylinder containing a full 360 liters of oxygen, sufficient for one hour. When empty, the unit may be refilled over and over again at any oxygen servicing center that deals in medical oxygen. Depots are located in every major city in the United States. The kit is suitable for use by factories, travelers, institutions, schools, first aid rooms, civil defense units, police squad cars and fire departments, etc.

For minor ailments, not ordinarily calling for the services of a doctor, oxygen may be self-administrated by inhalation therapy. Kit supplies quick resuscitation in first aid emergencies. Kit is lightweight, easy to carry and to use, always ready.

NEW BOTTLE CRUSHER

(Use Key # 749 on Inquiry Card on page 1)

DISPOSING OF rejected or broken bottles is now possible with the new "Rescor Bottle Crusher." The unit features a totally enclosed motor which is impervious to water. The heavy castings will withstand the impact of heavy glass bottles. The impellor or glass breaker is made of 30% carbon steel, and is guaranteed not to bend or break under extreme usage.

The unit is useful for bottlers, food packers, drug, cosmetic and sundry manufacturers, or wherever quantities of unwanted glass must be safely and economically disposed. Powered by a ¼ H.P. motor, the bottle crusher accepts bottles and other glass objects up to five inches in diameter. Available from the Rescor Industries.

"HOT 'N COLD" BEVERAGE CENTER

(Use Key # 750 on Inquiry Card on page 1)

EVEN THE smallest firm can afford a new "Hot 'N Cold" beverage center. It is a well established fact that proper nutrition and eating habits tend to decrease fatigue and thus decrease the incidence of industrial accidents. The coffee break can often provide that nutritional or psychological lift which spells the difference between increased production or an accident.

The Ebco Mfg. Co. in introducing this new water cooler-bubbler, hopes that employees will be encouraged to use it to prepare nutritional hot soups and chocolate as well as instant coffee. This complete unit includes a refrigerated compartment, ice cube trays, food storage area, etc. and is housed in a high-styled, gray, cabinet.

EQUALIZER INSOLES

(Use Key # 751 on Inquiry Card on page 1)

HY-TEST SAFETY Shoe Division of International Shoe Company will distribute Dr. Leydecker's patented "Foot Guides" to industrial and retail customers. Formerly available on a prescription basis only, the "Foot Guides" have been standardized according to size and width. Known as "Equalizer Insoles," they are made and designed to fit shoes using standard American size and width specifications. The insoles are available in Men's Sizes. The equalizer insoles are available for salesmen, business executives, professional men, and industrial workers who spend considerable time on their feet.

NEW CENTRIFUGAL BLOWERS

(Use Key # 752 on Inquiry Card on page 1)

A NEW LINE of centrifugal blowers having a wide range of pressures and volumes has been announced by Joy Manufacturing Company. Sizes vary from 440 cfm at ¼" static pressure for a single-width, single-inlet fan to more than 460,000 cfm at 16" static pressure for a double-width, double-inlet fan. Called "Joy-Centrifoil Fans," these new blowers feature an improved design, blades with an airfoil shape. The results, according to the manufacturer, are greater efficiency, silent operation and reduced horsepower. The new fans meet the requirements for commercial and industrial heating and ventilating applications as well as those of a forced or induced draft nature.

NEW LOAD STABILIZER

(Use Key # 753 on Inquiry Card on page 1)

A LOAD STABILIZER attachment for use with fork lift trucks has been developed by Lewis-Shepard Products, Inc. Designed primarily for unstable loads of soft drink bottles, the stabilizer is recommended for all types of loads that cannot be nested or tied together. The stabilizer clamps hydraulically atop such loads. The stabilizer has a vertical stroke of 24 inches, ranging from a minimum opening of 40 inches above the forks to a 64 inch maximum. Its clamping area is 34 inches square. All controls for operating the stabilizer are located right in the fork truck's cab.

Actually 3 sponge-rubber-lined pads, the stabilizer completely eliminates breakage even with loads tilted outward as much as 11 degrees. This feature makes it an extremely important fork lift truck accessory when loading highway trucks with slanted docks. Because the arms of the stabilizer are mounted on pivots, it can handle loads with varying case or bottle heights.

BOLTLESS STEEL SHELVING

(Use Key # 754 on Inquiry Card on page 1)

A NEW LINE of boltless adjustable steel shelving is available from the Penco Div. of Alan Wood Steel Co. Called "Penco T line shelving," it is designed for use in industrial plants, offices and warehouses. It offers fast installation and easy rearrangement of shelves with high strength and rigidity.

The basic element of the new shelving is the new channel clip. The male part of this clip has two stamped T's to insert through holes in an upright angle post. The female unit slides over these T's, clamping both parts firmly in place. The clip's flaired top fits under the edge of the shelf. Supported with these clips, the shelves are strong and rigid yet easily rearranged on 1-in. centers. Boltless shelving is available in open and closed type standard shelving and in ledge and counter units in a wide variety of sizes. It is manufactured in depths of 12 through 36-in. and heights from 3-ft., 3-in. through 10-ft., 3-in. The standard width is 36-in.

All steel components in the new shelving are pre-conditioned with a protective phosphate coating before painting. This gives maximum paint adhesion and resistance to rust, corrosion, cracking and peeling. The units are available in colors of gray or green baked enamel.

FIRE-RESISTANT CLOTHING

(Use Key # 755 on Inquiry Card on page 1)

A NEW SERIES of "Fyre-Free" fire-resistant clothing has been added to American Optical Company's line of protective clothing. The new clothing is made of 100% cotton cloth which is given a permanent-type flameproofing. Material combines the soft feel of untreated cotton with this flameproofing feature. Material weighs approximately 11½ ounces per square yard finished—is lightweight and comfortable. Has good tensile strength in both warp and fill. Clothing made from this material is known to last up to 3 times as long as clothing of untreated fabric. "Fyre-Free" is mildew-resistant and does not deteriorate in damp climates or operations. Clothing can be laundered or dry-cleaned as many as ten times without loss of its flameproofing properties. If exposed to flame there is no afterflame or afterglow. Material meets American Standards Association requirements for flameproofed fabrics.

The new clothing is available in a complete line of sleeves, cape sleeves with and without bibs, regular and split leg aprons, overalls, coats, coveralls, hip leggings and pants. Clothing is recommended for spot welding, drop forging, light metal splash and similar exposures.

IMPROVED FLOOR SURFACER

(Use Key # 756 on Inquiry Card on page 1)

THE GARLAND Co. has developed several improvements to its "Inlaycrete Floor Resurfacer" which provide an easy method of giving a permanent, smooth surface to worn, cracked, or broken concrete floors. The process involves the simple use of two products, first a brush application of a bond and then the application of topping.

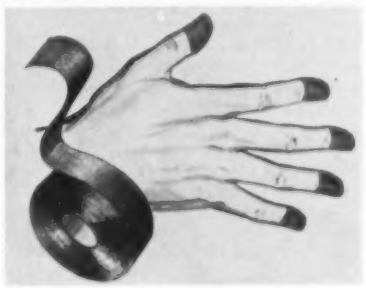
The new SGM additive in the bonding compound cuts labor in half by eliminating the need to chip the surface to establish a firm hold for the topping. As a result of the new additive, the bond not only binds the old floor together but provides a bond with the topping that will not separate even under the most extreme pressures. To the "Inlaycrete" topping now has been added a special fast-setting binder known as "Garvolite" which creates an easier workable mix with a minimum of water.

NEW PROTECTIVE SAFETY TAPE

(Use Key # 757 on Inquiry Card on page 1)

"GUARDTEX," a green "safety-colored" self-adhering safety tape, developed and manufactured by General Bandages, Inc., is reported to help cut accident losses and speed production by protecting hands, fingers, and forearms against cuts, burns, and abrasions, and by helping to reduce eye strain. The tape is said to be easy to apply and remove, leaving no sticky residue or color stain, causing no maceration. Dispensed in rolls of desired widths, it is reported to conform neatly to finger contours without bulging or "corners," and to preserve the natural "feel" and flexibility of the fingers. A special oil resistant style is also available in white.

Uses cited for the new green tape include: in transformer manufacturing, for pig-tailing, twisting, or winding wires; in laminating operations for handling sharp stampings; in glass manufacturing, for handling sharp-edged sheets or hot glass; in working with plastics, for removing and opening hot molds; in buffing and grinding



operations, for protection against flying sparks and against cuts, scratches, and abrasions from rough, sharp, splintery, or otherwise inherently hazardous materials.

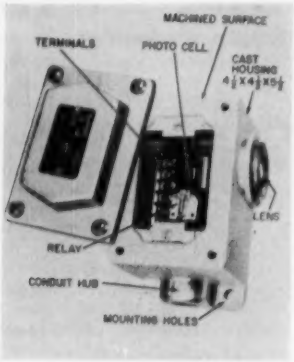
NEW FLOOR RESISTS CORROSION

(Use Key # 758 on Inquiry Card on page 1)

A FLOORING material which can withstand up to 50% inorganic acid conditions without corroding has been developed by the Stonhard Company, Inc. Called "Stonclad," this tough material will withstand hot concentrated alkaline solutions up to 170°, nitric acid up to 15%, and concentrated sulphate solutions. Its new formulation, synthetic resins used together in such a way that a macro-polymer, or "chain strength" product is achieved, also stands up under heavy traffic.

Trowel applied, the product is packaged in three ready-mix parts which are com-

bined at the job site. Under normal conditions the mixture will remain workable for more than an hour. A new installation may be used for foot and light truck traffic after five hours. One unit of Stonclad applied at ⅛" thickness will cover 75 sq. ft. In most cases no special floor preparation is required. Simple cleaning is usually sufficient preparation before application of the product over the old surface. Nor is there any need to remove machinery. The product can be formed, and bonds tightly, to the base parts of equipment. Available in two colors, tile red and medium grey, "Stonclad" dries to a smooth or non-skid finish.



EXPLOSION-PROOF PHOTORELAYS

(Use Key # 759 on Inquiry Card on page 1)

A NEW explosion-proof photorelay designed with no-maintenance features, for machinery, production and process applications has been developed by Photobell Co. This new photorelay and projector meet the requirements for a machine or production component where tough factory conditions prevail. They withstand a high degree of wetness, dirt, shock, vibration or extremes of temperature. There is no internal heating or warm-up delay prior to operation, says the manufacturer.

Operation is from 100–130 volts at 25–60 cycles. The unit is controlled by eight foot-candles of light from a light projector in an explosion-proof housing. The projector and photorelay can be placed up to 20 feet apart. Factory speed tests are made at 1,000 per minute and the maximum recommended counting rate is 600 per minute. The relay contacts are rated at five amps SPDT. Many variations of this device can be supplied to meet the requirements of special applications and original equipment manufacturers. The housing with a special lens assembly permits the photorelay and light projector to be used in explosive atmospheres.

IMPROVED FLOOR MACHINE

(Use Key # 760 on Inquiry Card on page 1)

HUNTINGTON LABORATORIES, Inc. has announced a new 20-inch "Silent" floor machine with a new type gear reducer, a separate unit from the motor that assures quieter operation and simpler repair. The new Model 20-E is balanced for ease of operation. The maintenance man can

maneuver the machine with slight pressure from his fingers. The big one-horsepower motor rests over the brush with the weight assuring balance, uniform coverage and effective use of power. Runaways are prevented by the safety switch which instantly stops the machine once the grip on the handle is released.

This machine comes equipped with 50 feet of cable; a switch which turns the machine on and off with pressure from either hand; a simple reversal mechanism; and an optional handle adjustment that adjusts to any angle through an arc of 90 degrees from vertical. The new floor machine polishes, scrubs, sands, seals, waxes, steel wools and shampoos floors.

SOLVENT-PROOF SYNTHETIC CHAMOIS

(Use Key # 761 on Inquiry Card on page 1)

A NEW SCIENTIFIC innovation, imported from West Germany, will prove a valuable industrial cleaning tool. Called "Chamie-Tex," it can be used wherever natural chamois is desirable, for all wiping and cleaning jobs, and for many tasks where old-type chamois proves useless. The fabric is made of oil and solvent-proof nitrile rubber for use in gasoline, kerosene, and even the harshest industrial solvents to clean machinery and machine parts. When used for cleaning greasy machinery, a simple rinsing in a solvent, after use, removes all grime from the cloth. There's an added safety factor when cleaning ma-

chine parts—"Chamie-Tex" never becomes slimy or slippery and it can be washed in any soap or detergent. Wet or dry, it always stays soft. Other features are that it won't mildew or rot, nor will it crack or tear even when dry.

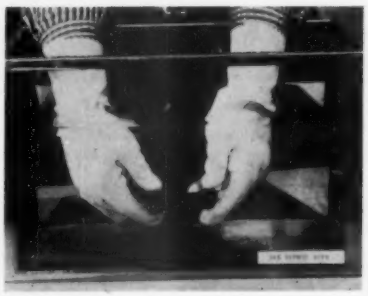
For maintenance crews in factory buildings or institutions, "Chamie-Tex" can be used for all types of glass surfaces, woodwork, desks, office furnishings, walls, etc. It leaves a smooth, dry surface, absorbing liquid and moisture as it works. Every cloth is 18" x 21", offering more than 370 square inches of cleaning area and is packaged individually in a plastic storage bag. Available from the Milwaukee Dustless Brush Co.

NEW ACID RESISTANT GLOVES

(Use Key # 762 on Inquiry Card on page 1)

THE PIONEER RUBBER CO. has added a new V-20 medium weight model to the "Stanflex" line. The new gloves were tested in 50% solutions of nitric and chromic acids (both highly corrosive substances known to deteriorate both rubber and synthetic gloves). V-20, made of Pylox, withstood the deteriorating effects of both acids even after 48 hours of immersion.

Other experiments have shown that V-20 can be used in cleaning component parts in 30% hydrogen peroxide for rocket and missile parts. Similarly, the V-20's are replacing gloves used in the operation of radioactive acid solutions (nitric acid and hydrochloric acid) which normally cause rapid deterioration of thin rubber and synthetic gloves.



The V-20 "Stanflex" model is also suitable for jobs requiring finger sensitivity. The non-binding design of the tapered fingers and roomy palms give bare-hand comfort to the wearer. The gloves can also be turned inside out so the textured inside finish can provide a non-slip grip sometimes required for special handling jobs.

The new glove is resistant to alkalis and inorganic acids, oils, greases and some solvents. Available in small, medium and large sizes, the new gloves offer ample wrist protection. Their non-allergenic properties make them useful to persons allergic to ordinary rubber gloves.

UPRIGHT LADDER FEATURES SAFETY STEPS

(Use Key # 763 on Inquiry Card on page 1)

A NEW FLAT step marine ladder specially designed for safety and to withstand hard usage is announced by The Cleveland Ladder Co., Inc. The ladder is constructed with side rails of Sitka Spruce or West Coast Hemlock, reinforced with aircraft cables, hand rails of 1½" diameter Maple, Linseed oil treated, strong steel boots, all metal parts plated and with wide aluminum safety tread steps.

The new steps are a one-piece, raised serrated stamping that forms a strong grated surface. It has a 55% open area which will not allow snow, sleet or ice to

build up and the tooth-like projections assure a firm non-slip surface for boarding. "Cle-Lad" super safety marine boarding ladders are made to assure maximum safety and long hard usage.

HEARING AID POWERED BY SUNLIGHT

(Use Key # 764 on Inquiry Card on page 1)

THE SUN'S FREE and inexhaustible supply of energy is now available for the benefit of the nation's hard of hearing. The Zenith Radio Corp. announced a new eyeglass hearing aid, the "Solaris," that operates on free power from ordinary sunlight. The "Solaris" utilizes silicon cells of the same type used to power the radio transmitter in the Navy's Vanguard satellite. Company engineers say that the amount of sunlight received on a slightly overcast day is enough to operate the unit efficiently without using a battery. When light is insufficient, the battery automatically cuts in to operate the hearing aid. A tiny nickel cadmium storage battery, that weighs only a fraction of an ounce and is capable of many recharges, may be used in the instrument. Bright sunlight will operate the hearing aid and recharge the battery. The instrument is equipped with four tiny silicon sun powered cells which convert the sun's rays directly to useful energy.

ELECTROSTATIC VOLTMETER

(Use Key # 765 on Inquiry Card on page 1)

THE ABILITY to make accurate, drift free measurements of the voltage of an electrostatically charged surface without physical contact is now possible. The instrument for accomplishing this is announced by Monroe Electronic Laboratories, Inc. This instrument essentially eliminates draft and renders the measurement independent of variations in probe-to-surface spacing. The above instrument can be supplied to also provide drift-free electrostatic potential gradient measurements.

Suggested fields of application include manufacture of sheet plastic materials, paper manufacturers, synthetic textiles, petro chemical operations, atomic energy, mining operations and many more. A portable gradient instrument will also soon be available. These instruments can be supplied with an audio-visual alarm device permitting monitoring of hazardous atmospheres encountered in surgery, mining operations, manufacture of explosives, etc.

ANTI-SLIP FLOORING

(Use Key # 766 on Inquiry Card on page 1)

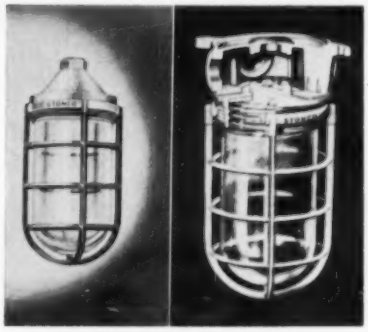
BUSTIN STEEL Products, Inc. announces the introduction of a new all-direction, anti-skid comfortable treading surface grating—the new "Firm-Grip." It is made of solid steel bars and light weight assembly where its serrated surface affords effective non-skid and yet a comfortable treading surface. It is suitable for installations where men and women employees are required to stand on one location performing their work. "Firm-Grip" has been tested and found most satisfactory especially in plants where female employees predominate.

VAPORTIGHT LIGHTING FIXTURES

(Use Key # 767 on Inquiry Card on page 1)

A NEW LINE of vaportight lighting fixtures, announced by Stonco Electric Products Co. is designed to protect lamps and lighting installations from premature failures caused by seeping moisture, rain, ice, sleet, corrosive fumes or non-explosive vapors and gases. Pendant, ceiling and wall types in sizes up to 200 watts are available, all UL and CSA approved for vaportight service. Each fixture is individually packaged with components and accessories for on-the-job installation. Components are rustproof, corrosion-resistant aluminum and die cast for uniformity and interchangeability throughout the line.

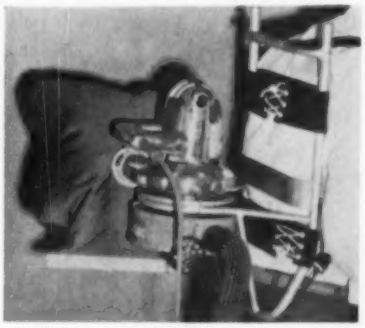
The manufacturer points out that by taking full advantage of precision designing and high-compression precision die casting, stronger, roomier components are possible with less weight and fewer parts. As a result, the new fixtures are easier to install and provide years of trouble-free service in outdoor and indoor locations where moisture and the elements are damaging to ordinary units. The new line is said to be useful in processing areas, cold storage and meat packing plants, breweries, foundries, loading docks and platforms, power houses, tunnels, bridges, basements, shower rooms and all other exposed or damp locations.



BACK PACK CLEANER

(Use Key # 768 on Inquiry Card on page 1)

A NEW DEVELOPMENT in a powerful, lightweight back carried vacuum cleaner and air sweeper is now available from the Breuer Electric Mfg. Co. Three removable motor units can be used on the unit, from ¾ to 1½ H.P. Operators can move from room to room, climb scaffolding or clean overhead with lightweight extension handles. The "Pac-Vac" can be changed from



a vac to an air sweeper in a few seconds, for moving paper and debris from under seats, machinery and hard to reach areas.

NEW ICE REMOVER

(Use Key # 769 on Inquiry Card on page 1)

THE MONROE Company, Inc. announces improvements in its "X-73 Ice Remover." Tests seem to indicate superior melting speed and coverage.

Depending on the temperature and depth of snow and ice, 100 lbs. of X-73 will now clear 5,000 to 8,000 square feet of surface. Available in 100 and 300 lb. drums. Orders of 1,000 pounds or more may be packaged in 80 pound bags.

YOUR FREE INQUIRY CARD–Page 1

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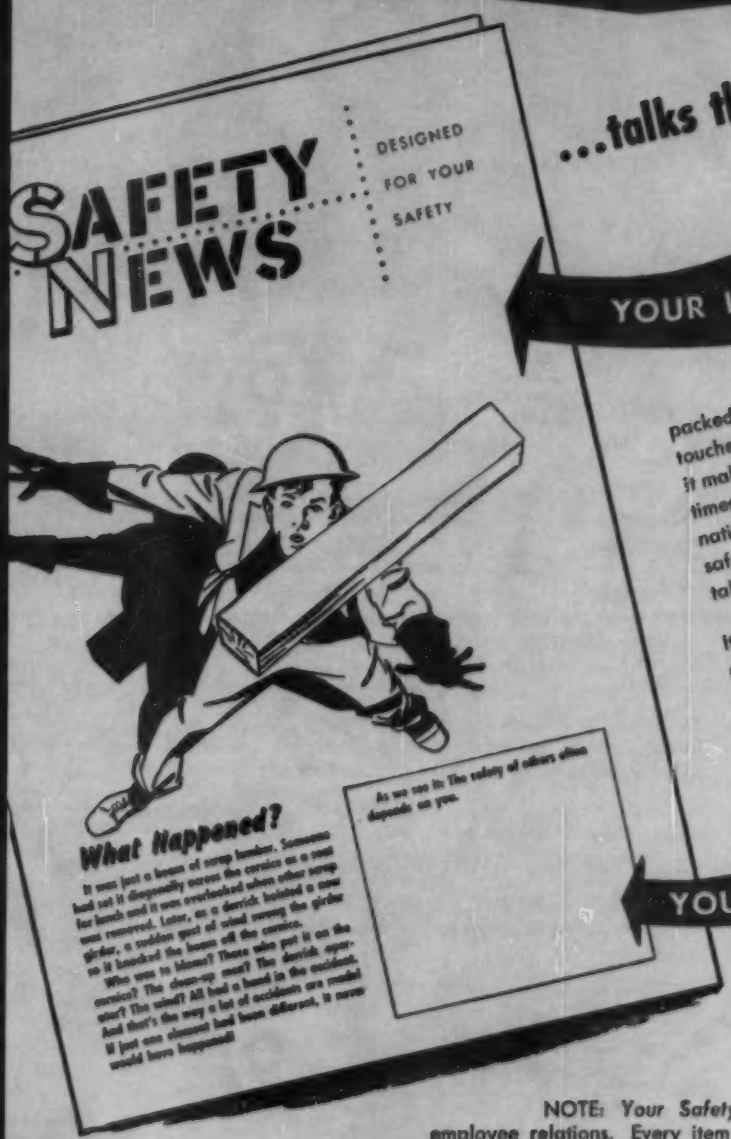
SEND THIS PERSONAL SAFETY MESSAGE TO EVERY ONE OF YOUR EMPLOYEES.

- Safety is made appealing . . . vivid . . . engaging . . . colorful!
- Each worker clearly sees how safety benefits him . . . how doing his part helps others!
- You get enthusiastic safety cooperation instead of tolerance . . . from every employee . . . every month!



. . . talks the worker's language!

YOUR IMPRINT HERE!

packed with pictures, alive with animated cartoons, touched with humour that gives snap to your message, it makes safety interesting and down to earth. Twelve times a year it covers accident hazards. Across the nation leading industrial firms state it's the only safety paper their employees will read . . . and take home to their families.

It gives the employer the advantages of personal contact . . . saves time and expense. One "lost time" accident prevented . . . more than pays for the yearly cost! Try it . . . it works!

YOUR SIGNATURE HERE!

Make Your Safety News your own publication . . . your good will ambassador . . . working for you toward better industrial relations. If you wish, your facsimile signature can be printed here to identify you with the message that gets next to your men and boosts morale.

NOTE: *Your Safety News* is designed to promote better employer-employee relations. Every item is carefully weighed and tailored to this viewpoint!

INSIDE PAGES
(Pages 2 and 3)

THOUGHTLESSNESS IS A THIEF
He'll steal his way into what you're doing, distract your attention and walk off with a finger, arm, eye or foot. Thoughtlessness takes many forms: it may be daydreaming, or worry about some personal problem, or just plain inattention. Anything that distracts you, especially around machinery, is a thief of your personal safety.
PLAYFULNESS IS A PIRATE
He is a deceptive rascal. His hi-jinks may put him in the spotlight, but his practical jokes and showing-off often result in serious bodily injury and even death. And note this: he, himself, has lost a leg! As so often happens, horseplay can boomerang and the practical joker gets hurt too!
AN INTIMATE LOOK AT FOUR VILLAINS
SAFETY LAZINESS IS A SIMON LEGREE
If you are lazy about safety rules, then accidents will have the whip hand. We are safety-lazy when we don't bother to use mechanical guards, to take time to get the right tools for the job, to wear protective equipment such as goggles, hard hats, safety shoes, respirators, gloves, etc. Yes, Simon Legree has a whole pack of accident hounds to trail you.
HAZARDOUS METHODS ARE A HOLD-UP MAN
This villain, unsafe work habits, likes to lie in ambush for the unwary. But how do we fall into bad working habits? It may be by trying to cut corners, by wanting to keep to the old way of doing things, or by over-confidence. It's hard for anyone to believe that an accident can happen to him. It's easier to make excuses to ourselves for ignoring safety rules, but alibis only lead us up a blind alley with an accident waiting in ambush.
What You Should Know About Carbon Monoxide
This is a picture of carbon monoxide gas!
That's right, you can't see it. It's colorless, non-irritating, tasteless, practically odorless, but also deadly.
Here are the symptoms of carbon monoxide poisoning. First, a tight feeling across the forehead, followed by headache, throbbing temples, weariness, weakness, dizziness, nausea, loss of muscular control, increased pulse and breathing; BUT if the concentration of the poison gas is high, there may be loss of consciousness without these warning signals.
Just a few breaths of air containing 1% carbon monoxide can be fatal . . . so can one part of carbon monoxide in a thousand parts of air when breathed for 90 minutes.
It is possible for carbon monoxide to leak inside of a car if there is a loose exhaust pipe or manifold connection, blown-out exhaust gasket, cracked exhaust manifold, or leaky muffler. Play it safe.
1. Be sure your muffler and exhaust are in good condition (they can leak long before they become noisy).
2. Always keep a car window open, even a little, for fresh air.
Two Excellent Reasons
For Wearing Safety Shoes

EMPHASIZES SELF INTEREST

Your employee's self interest in his own safety is always emphasized. Constant safety consciousness is promoted by covering household hazards, transit to and from the job and on the job caution against accidents.

CLEVERLY ILLUSTRATES THE POINT

Artwork is carefully chosen to lodge home each point persuasively. The cartoon style makes YOUR SAFETY NEWS as familiar and welcome as the picture packed Sunday supplement.

WINS READERS WITH A FOLKSY APPROACH

Keeping the contents folksy, adding the light note of humor, gets your message across with a nudge instead of a bludgeon. Your monthly chat gets enthusiasm instead of indifference.

RIVETS ATTENTION WITH VIVID COLOR

Generous use of color sparks the message, and adds impact to the contents of YOUR SAFETY NEWS. Each issue is as alive as any news-stand favorite.

HOW TO ORDER:

YOUR SAFETY NEWS may be ordered with either the standard imprint or with your Own Special Imprint. The standard imprint reads "PLEASE COOPERATE FOR THE SAFETY AND HEALTH OF ALL . . . signed . . . A SAFE WORKER."

You can personalize YOUR SAFETY NEWS with the name of your firm and the name or facsimile signature of a company representative as illustrated. Give full instructions for your Special Imprint on the order blank below:

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Item (2) INDIVIDUAL NAME OR SIGNATURE: (If Desired). On a sheet of white paper, please show, in black ink, the individual name or signature, if desired, which is to appear each month on the first page of YOUR SAFETY NEWS.

NOTE: Although a personal signature is effective, some firms substitute: SAFETY DEPARTMENT, YOUR SAFETY COMMITTEE, A SAFE WORKER, etc.

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501 to 1,000 copies . .	4½¢ each	4¢ each			

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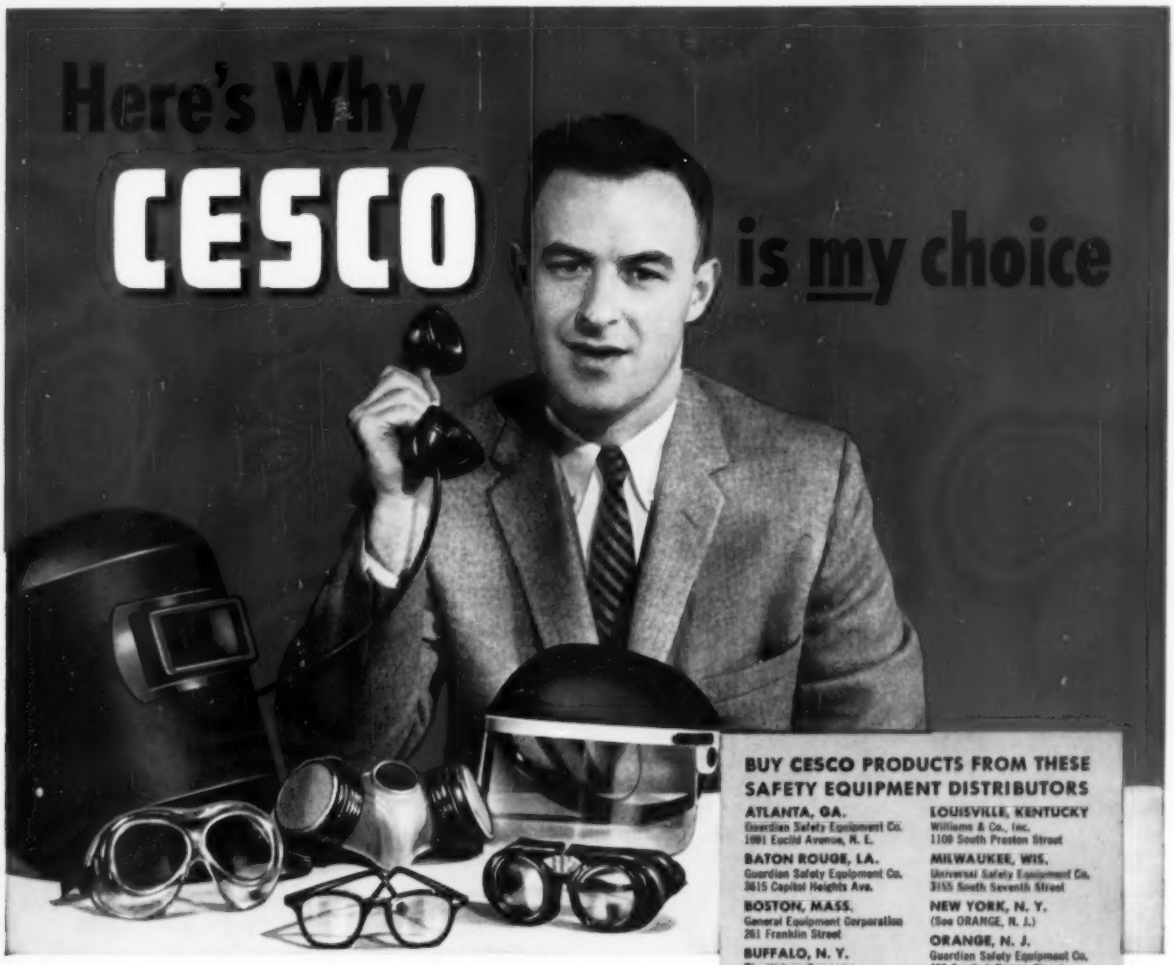
Here's Why CESCO is my choice



There's a CESCO Representative Nearby Ready to Give Me Fast Action On Any Safety Equipment Need

As a safety engineer, I expect two things from my safety equipment source—a complete line of all types of safety equipment and prompt delivery of my order. For years, CESCO has more than met these requirements on both counts. Their distributors are truly safety specialists in every sense of the word, who offer a well-engineered, top quality line of safety glasses, goggles, face shields, welding helmets, respirators, hoods—in fact all of my many safety equipment needs. Equally important, their distributors are located from coast to coast, ready to give expert safety equipment advice. Then, they back up their recommendations with fast delivery of my order. In most cases, I've found the CESCO distributor is able to fill my order from his own stock.

Make a note of the CESCO distributor nearest you and call him next time you have a safety equipment problem

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261 Franklin Street

BUFFALO, N. Y.
The Watson Company
1362 Kenmore Avenue

CHICAGO, ILL.
Universal Safety Equipment Co.
5115 West Diversey Avenue

CINCINNATI, OHIO
Williams & Co., Inc.
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CLEARWATER, FLORIDA
Car-Mad Equipment Company
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Safety, Incorporated
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LOUISVILLE, KENTUCKY
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MILWAUKEE, WIS.
Universal Safety Equipment Co.
3155 South Seventh Street

NEW YORK, N. Y.
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ORANGE, N. J.
Guardian Safety Equipment Co.
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PEORIA, ILL.
Standard Industrial Products Co.
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PHILADELPHIA, PA.
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PITTSBURGH, PA.
Williams & Co., Inc.
901 Pennsylvania Avenue

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Safety, Incorporated
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Safety Equipment, S. A.
Sullivan No. 95

MONTREAL, CANADA
The Butler Optical Company, Ltd.
1620 Mountain Street

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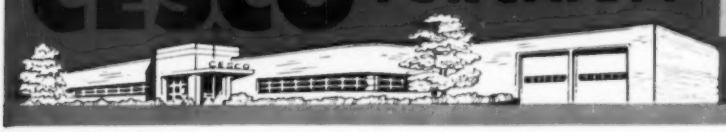
CESCO FOR SAFETY



CHICAGO EYE SHIELD COMPANY
2709 West Roscoe Street, Chicago 18, Illinois

(For details, use Key # B-20 on card on page 1)

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THANTIS Lozenges relieve pain promptly—reduce infection—act prophylactically.

Twenty-seven years' extensive clinical and lay use has proved the safety and effectiveness of this popular product.

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